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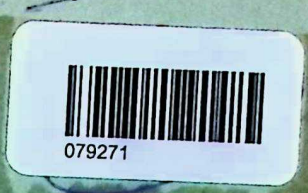

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HUNGER

PAUL STREETEN

Introduction

The need for food is perhaps the most basic of all human needs. People must eat, even if they drink unsafe water, are illiterate, and are not inoculated or vaccinated against diseases. Poor people spend between 70 and 80 per cent of their total income on food, and more than 50 per cent of additional income. The poorest of the poor continue to spend the same proportion on food as their pitiful incomes rise, until they reach the point when this proportion begins to decline. As their incomes rise further, they spend a smaller proportion on food, of that smaller proportion a smaller proportion on cereals, and of that smaller proportion a smaller proportion on cheaper cereals. Lack of adequate food makes people not only hungry and less able to enjoy life, it also reduces their ability and, by causing apathy and in extreme cases lethargy, their willingness to work productively, and thereby to raise the means to combat their hunger. In addition, it makes them more susceptible to disease by reducing their immunity to infection and other environmental stresses. Prolonged malnutrition among babies and young children leads to reduced adult stature; severe malnutrition is associated with decreased brain size and cell number, as well as altered brain chemistry. Malnutrition of women during pregnancy results in low birth weight of their children, which is a particularly important cause of infant mortality. Children who suffer from sever malnutrition show lags in motor activity, hearing, speech, social and personal behaviour, problem-solving ability, eye-hand coordination and categorization behaviour, even after rehabilitation.

Hunger in this essay includes all conditions resulting from inadequate food intake. From acute starvation in a famine, to liability to illness and debility due to food deficits, to energy deficits leading to apathy that are not experienced as hunger, to undernutrition, malnutrition and the occasional pangs of hunger experienced by poor people, that do not have harmful effects on life or work. Excluded from consideration is hunger of those who have the capacity to satisfy it but do not wish to do so because they are fasting for religious reasons, or are on hunger stike, or wish to conform to some model figure, or suffer from anorexia nervosa, etc. The distinction is interesting because it brings out the need to differentiate between capabilities, functionings, commodities, needs and utilities. (See A.K. Sen, *Commodities and Capabilities*, North Holland, 1985.)

Among the world's chronically hungry people are the ultrapoor, the landless and nearly landless labourers, young children of poor families, pregnant and lactating women, and the old. They live in Asia, on the Indian sub-continent and

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in Indonesia and the Philippines, and in Sub-Saharan Africa. They constitute about 10–15 percent of households, containing 15–20 per cent of the population and 17–25 per cent of pre-school children in these countries. About a billion people consume less food than they would like, continue to spend this same proportion on food as their incomes rise, and hundreds of millions are handicapped by undernutrition.

According to a World Bank study there are 340 million people in the developing countries suffering from nutritional deprivation (inadequate calories to prevent stunted growth and serious health risk), which represents about 16 per cent of their populations. In low-income countries this proportion rises to 23 per cent. The same study suggests that 730 million people suffer from undernourishment by having "not enough calories for an active working life". This amounts to 34 per cent of the population of all developing countries and 51 per cent of the low-income countries. A study by Reutlinger and Alderman estimates the number of undernourished at over 800 million people.

Hunger and malnutrition today are not mainly the result of a global shortage of food. So far, over the long run, Malthusian predictions of population increasing faster than food have not come true. Current world production of grain alone could provide everyone with more than 3000 calories and 65 grams of protein daily. It has been estimated that 2 per cent of the world's grain output would be sufficient to eliminate malnutrition among the world's 500 million malnourished. Between 1950 and 1984 real cereal prices—the amount of manufactured goods that could be bought with a ton of cereal—fell by over a third—i.e. by 1.3 per cent per year per pound.

It is true that since 1984 world food production per head has fallen (between 1986 and 1988 by 14 per cent) and is now (1989) back at where it was about two decades ago. The agricultural resource base has deteriorated, new technologies have not been forthcoming or not been applied at the same rate as before, and depressed farm prices have discouraged production. Population growth has continued to be high. So, at least at the moment of writing, problems of supply are once again in the foreground. And some observers argue that the rapid growth of grain production per head since 1973 was achieved by overploughing land and overpumping water, with the result that soils were eroded and water tables dropped—an unsustainable situation.

Malnutrition is not primarily a problem of an inbalance between calories and protein. Most surveys have found that if energy intake is adequate, protein needs are also satisfied, and if not, protein is burned up for energy requirements.

The problem is not only one of production, but also of distribution: it is not primarily physical food shortages, but social and political arrangements at the international level that are responsible for the unprecedented amount of hunger and malnutrition. It is the fact that hunger today is unnecessary that makes its continued existence so shocking. The productive capacity of the world is now capable of feeding all the mouths in existence, yet it fails to do so. The problem is partly one of the distribution between countries, regions and income groups,

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between sexes and within households. In general, it is the very poor, who spend most of their income on food, who suffer most from hunger and malnutrition. In many countries more than 40 per cent of the population suffer from calorie-deficient diets, and about 15 per cent show deficiencies of more than 400 calories per day. Within families it appears that children, and in some societies, such as North India and Bangladesh, women, particularly when pregnant or lactating, receive inadequate amounts of food. Calorie-deficiencies vary by geographical area, season and year.

The production of cereals by developing countries grew between 1961 and 1980 at an annual rate of 2.9 per cent, while consumption grew at 3.2 per cent per year. As a result, cereal imports in the developing countries grew from about 15 million metric tons to 64 million tons. In the same period cereal production in the advanced countries grew by 3.1 per cent per year but consumption by only 2.5 per cent. The difference was exported to the developing countries. Their share in world imports of cereals rose, as a result, from about 36 per cent to 43 per cent. Since the bulk of the increase in food production has occurred in the advanced countries, and since global redistribution through grants is ruled out for political reasons, developing countries must either earn more foreign exchange to buy the food, or grow substantially more food themselves. (Food availability in the developing countries increased from 208 kilograms per head in 1961 to 218 kilograms in 1976.) This is particularly true of Africa, until 1981 the only region in the world where food production has grown less rapidly than population. Since 1981 Latin America has also registered a drop in food production per head.

The other part of the solution is the generation of adequate incomes of the poor, including both production for their own consumption and cash to buy food in the market. For farmers this means security of tenure or ownership of land, a regular outlet for sales and a supply of credit. Extra food production is necessary to meet the addtional demand created by population growth and higher incomes per head, and to prevent soaring food prices from cancelling the effects of higher purchasing power.

To achieve perfect nutritional standards is virtually impossible. A reasonable objective is to reduce the significant handicaps from nutritional deficiency. Many people in rich countries present medical problems from being overweight and obese, but no great social significance is attached to these ills. There may be as many as 7 million Americans suffering from malnutrition. In poor countries, people have adapted to mild cases of calories-deficiency by attaining a lower weight and height, by being less active, and, in the case of women, by ovulating less regularly.

Growth of incomes and of food production, important though they are, are not sufficient to eliminate hunger and malnutrition. Receiving more food does not necessarily meet the nutritional needs of poor people. It may simply meet the needs of the worms in their stomachs. Hunger and malnutrition is a problem of the pathology of the environment, and raising food intake by itself may not help. Cases have been recorded where it made things worse, because the extra

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food consumption of the earning members of families was matched by extra physical efforts, and the rest of the family got less. In other cases, extra income was spent not on food, and nutritional standards fell, as families moved out of the subsistence-oriented economy and became subject to the influences of the market. It may be not more food that is needed, but education, safe water, medical services, reduced work loads, fewer unwanted pregnancies, shorter walks to or between work places, counter-pressures to advertisements, or a land reform to permit people to make better use of their higher incomes and of the additional food supply. Food needs can sometimes be met more effectively by reducing requirements rather than by raising availabilities.

Raising the real incomes of the poor so that they can buy more food is clearly one important way of reducing hunger and improving nutrition. But this is a slow and cumbersome process and there are speedier and more direct ways. Iodine deficiency, which can cause goitre, apathy, and proneness to other diseases, is easily remedied by iodizing salt. More difficult to remedy are deficiencies in vitamin A, which can cause blindness and death in children, and deficiencies in iron, which lead to anaemia and reduced productive power. Protein-energy malnutrition, which may cause irreversible brain damage in children and apathy in adults, is the most difficult to remedy. Yet, it is the most serious problem in malnutrition, follwed by deficiencies in iron and vitamin A.

Apart from the emergency of famine, nutrition policies for the chronically malnourished poor call for a long-term, sustained effort. Intervention can take the form of agricultural policy, supplementary feeding, food fortification programmes, food subsidies and rationing, and complementary policies (such as employment creation) in non-food sectors. Particularly important are policies for foreign trade and the exchange rate, which determine how much the famer gets for his crop.

The entitlement approach to hunger and malnutrition, pioneered by A.K. Sen, suggests that diversified employment and earning opportuntities are as important as growing more food. It is true that this creates risks, such as the decline in markets or the rise in the price of food, but there are also risks in aiming at food self-sufficiency: harvests may fail or the soil may deteriorate. The need to consider such options is particularly important for Africa, where food production has fallen behind population increase. The best solution may be not to grow more food, but to create diverse, remunerative export industries.

Since hunger is largely a problem of poverty, and since the poor spend their money on different kinds of food from the rich, policies that encourage greater production of poor people's food—such as cassava, corn, sorghum and millet—can help reduce hunger and malnutrition. Food marketing and storage programmes can reduce regional, seasonal, and annual shortfalls in supplies and increase in prices. Policies to encourage production of food for the poor should extend to all aspects of agricultural policy, including research into new varieties, extension programmes, credit and marketing.

Supplementary feeding may take place in schools, at work, or at clinics for

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pregnant or lactating women. With the receipt of extra institutional food, however, meals at home may be curtailed, so that the vulnerable groups do not get much additional food, and, at least in the case of school-children, these programmes do not reach the groups particularly at risk, such as children below school age. Here again, the ease of intervention (because schools already exist and delivery is cheap) is inversely related to its importance. Food supplementation at the work place, if neither the food nor the extra energy is diverted to other activities, serves both a basic need and productivity.

Special foods and food fortification, as in the case of protein and vitamin fortification and salt iodization, have been successful up to a point, though they meet with both technical and political difficulties. General subsidies to food are very expensive, absorbing up to 20 per cent of budgetary expenditure in some countries, and selective programmes, such as food stamps, are difficult to administer. Programmes are easier and cheaper to administer if the subsidies are for food that is eaten only by the poor. Rich countries tend to tax poor urban food consumers in order to subsidize relatively better-off farmers. Poor countries have tended, at least until recently, to tax (often indirectly and in a disguised form) poor farmers in order to subsidize food such as high-quality wheat and rice that is consumed by the better-off urban groups. But among the poorest are rural landless labourers and urban dwellers who have to buy food and are helped by these subsidies.

An efficient and equitable system of subsidies to poor consumers that does not penalize poor producers of food is expensive and both administratively and politically difficult. When agricultural prices are increased as an incentive to production, measures should be taken to prevent greater malnutrition among those poor who have to buy food. Some countries have successfully overcome these difficulties.

The eradication of hunger and malnutrition is not only a problem of making the land more fertile and women less fertile. Action is needed on other fronts. Safe water and the prevention of intestinal diseases would enable people to absorb the same amount of food more effectively. Less time spent on collecting firewood and water, or on walking between unconsolidated plots of land, would reduce the food required for women. So would a reduction in unwanted pregnancies or premature deaths of babies. Education can help people to avoid diseases, such as diarrhoea, thereby raising absorption of food, and it can help them spend their money more wisely on nutritious food and prepare food more economically and hygienically; they can learn to complement their diet with local food; educated women tend to marry later and have fewer children. The battle against early weaning and against the use of baby formula has hit the headlines, but the desire of women to cease breast feeding is often part of the general process of modernization and urbanization, and the desire to emulate the more advanced groups in the country.

Hunger and malnutrition are the result of a complex set of conditions, all stemming from poverty. But although most people suffering from calorie-

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deficiencies are poor, not all poor people suffer from such deficiencies. Some quite high-income countries and groups of people suffer from considerable malnutrition, and some low-income countries have none. A.K. Sen has said that the danger today does not arise from Malthusian pessimism (the fear that food production does not rise with propulation), but from Malthusain optimism (the false belief that if we have solved the problem of food production, we have solved the problem of hunger).

The eradication of hunger is ultimately a question of the political power of the poor. It is sometimes said that free markets give everyone access to the labour force, and thereby to the opportunity to earn enough to meet all needs. But, as Partha Dasgupta has pointed out, "at systematically low levels of nutrition-intake a person's capacity for work is affected adversely. There is thus a possible vicious circle here. Those who have not title to non-wage income are vulnerable in the market for labour, their sole means of generating income." Not until basic needs are met can the market mechanism be said to guarantee productive work.

While power structures and the alignment of interest groups are such that entitlements to adequate food supplies are denied to the poor, hunger will continue. In some conditions, the interest of the ruling group can be harnessed to alleviate poverty and hunger. Infectious diseases do not draw the line at class or income boundaries. The repeal of the Conrn Laws in 1846 was in the interest of the industrial classes because it provided cheap food and low wages. A well nourished, healthy and educated labour force is a more efficient labour force. But while such interests can be harnessed to hunger removal, in the last resort it is the access to political power of the poor themselves which alone can guarantee adequate food supplies to all. This does not mean that only one type of political system can guarantee hunger eradication. Historical evidence has shown that a wide variety of regimes have eliminated the worst types of hunger within a short period. But some types of regimes make this achievement impossible. Some form of participation of the poor in making the decisions that affect their life and work is helpful, though not a necessary condition. But ultimately, the problem of eradicating hunger is a political problem rather than a nutritional or economic one

The Need for a Multi-Pronged Attack

To understand and combat hunger, malnutrition and undernutrition, we must abandon the notion that these are simply the result of an imbalance between food production and population. We have seen that hunger is the result of the pathology of the environment. Many factors determine this environment. They can be roughly divided into factors working on the supply of food and those working on the impact of available food on nutritional status. A principal objective of agricultural policies in developing countries is to rise the rate of growth of the production of food. A useful mnemotechnic device is to divide the factors on the supply side on which policies must work into six "Ins":

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1. Incentives (or prices)
2. Inputs
3. Innovation (technology)
4. Information (the diffusion of the technologies through extension services)
5. Infrastructure
6. Institutions (credit, maketing, land reform)

These six "Ins" or *Ins*truments provide a framework for understanding and eradicating hunger. Incentives are important for stimulating farmers to grow more food. It is the prices that farmers get for their crops in relation to the prices they have to pay for their inputs and their consumer goods that determine how much and what kinds of food crop are produced. But price incentives are not enough. Farmers must also have access to inputs: fertilizer, equipment, water, credit, etc. With limited land and labour, and a given technology, food supply runs into rapidly diminishing returns. We also need technologies to raise production with given resources: new high-yielding varieties, irrigation, etc. It is the role of innovation, of technical progress, which has for 200 years postponed the Malthusian limits. Technical progress has been largely institutionalized. Technological innovation is of no use unless the information is disseminated and accepted by farmers. We also need an appropriate infrastructure of roads, harbours, railways, storage facilities, etc., to get the crops to the markets and the inputs to the farmers. Without such a distributional network, incentives and innovations are frustrated. And we need social infrastructure—education, health and nutrition—to produce an efficient rural labour force. Finally, we need institutions, such as rural banks, efficient marketing institutions that buy, store, transport, ship and process the crops from producers to consumers and that bring the inputs to the farmers. To these we should add the need to change the composition of agricultural output in favour of the higher value crops, as long as the risks attached to growing and selling these do not exceed the extra benefits. Some of these "Ins" are best provided by a market, others by action in the public sector. It is the complementary and supplementary actions of the private and public sectors that produce the results, e.g., the combination of correct pricing policies for food, with the provision of roads and vehicles.

Complex and difficult choices arise within each of the six "Ins". Consider infrastructure, normally at least partly provided at public expense. There are choices between physical, legal, human, social and producer-specific types of infrastructure to be made; choices between centralized and decentralized types of infrastructure, choices between infrastructure for small, deficit farmers and the landless versus large farmers, producers and for consumers, choices between maintenance of existing and new projects, and choices between different methods of financing expenditure on infrastructure. The same is true for institutions and for information. Should, for example, extension workers concentrate on single lines of conveying information or should they combine several? All these activities compete for scarce resources with directly productive investment in food production.

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Another set of choices arises in the phasing or sequencing of the six "Ins". Where infrastructure, institutions and innovation are already in place, it will suffice to emphasize price incentives. Alternatively, some of these "Ins" can be *in*duced by others. Prices can stimulate innovation [Hayami and Ruttan, 1984], institutions and even public action on infrastructure. In other cases, action on one front can be a substitute for action on others. Heavy public subsidies to well-chosen inputs can be a substitute for higher prices of outputs. Phasing and sequencing are of the utmost importance, since most countries are too poor to do everything at once.

The six "Ins" refer mainly to the supply side of food for the eradication of hunger. As we have seen, measures are also needed for creating remunerative employment and incomes, for health and education, for reducing food requirements through eliminating unnecessary work (e.g. land consolidation to eliminate long walks between plots) and unwanted pregnancies, for population control and family planning, and for the distribution of food within households. Even with more than adequate food supplies and incomes, people starve either because parasites in their stomachs or because parasitic landlords-moneylenders, or, in some societies, because male heads of households deprive them of access to the nutritional benefits of food. The attack on hunger comprises reforms at the micro-micro level, what goes on within the family, at the meso-level, how macropolicies affect particular groups, at the macro-economic level, what happens to the exchange rate, at the macro-policy level, what is the system of land distribution and money-lending, and the power structure and at all intermediate levels, both private and public, and at the global level.

Food policy makers start from a fundamental dilemma. Should they keep food prices high in order to encourage production of food and raise the supply for all, including the poor in the long run, at the risk of hunger and starvation of poor food buyers in the short run? Or should they keep food prices low in order to ensure affordable food for poor buyers at the risk of aggravating food shortages in the future? The dilemma is aggravated by the fact that many food producers are also poor. There are two ways of resolving the dilemma. First, the policy makers may set high prices and then take specific measures such as rationing and subsidies to protect poor buyers. Or they may set low prices and compensate producers by subsidies to inputs or to their crops. The third horn of the dilemma is that the capacity to raise tax revenue or to administer rationing or fair price shops is very scarce in developing countries.

Another dilemma is whether to "target" food subsidies on the most needy groups or cover a wider group, possibly the whole population. There are bound to be leakages either way. It is very difficult to implement a programme that covers *all* the poor, and *only* the poor. Wider coverage can become very costly, narrower coverage runs the danger of leaving out needy people. It also taxes scarce administrative capacity. It is better to err on the side of excess coverage, and recuperate some of the revenue through forms of taxes that do not hit the most vulnerable, at least directly, such as a tax on alcohol or cigarettes.

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The multi-pronged attack applies also to the agents. We think normally of government action through taxes, subsidies, employment programmes, feeding programmes, etc. But non-governmental organizations such as Oxfam and private agents also have important roles. For example, A.K. Sen has shown the importance of a free press, both as an early warning system about impending famines and as a pressure group on governments to respond quickly and adequately to threats of famine.

Export Crops v. Food for Domestic Consumption

There has been a good deal of discussion of the respective merits of export crops and food for domestic consumption. Some have argued that if the comparative advantage points to export crops, it is they that should be promoted and the foreign exchange earned be used for inputs into agriculture or industry, or even for food imports. On the other hand, there have been those who have argued that export crops impoverish the poor, deprive the people of food, and lower nutritional standards. It has also been argued that they are ecologically destructive.

A parallel debate has gone on over the respective merits of marketing more food, whether for the domesitc market or for exports, against growing more food for consumption within the farm household that grows it. Some of the arguments that apply to the debate on exports versus food for domestic consumption also apply to the debate on more marketing versus more production for own consumption.

Clearly much depends on the institutional arrangements. If export crops are grown on large plantations, perhaps owned by foreigners, which generate little employment, while food is grown by small farmers, the impact on income distribution will be different according to which type of crop is promoted. If the foreign exchange earned by export crops accrues to the government and it spends it on arms or office buildings, while the receipts from food would have gone to the poor peasants, again the distributional impact will be different.

The interesting fact, at least in Africa, is that there is little evidence that there is a necessary conflict between the two. Where land and labour are not scarce, the movements in export crops go in the same direction as the movements in the production of food for domestic consumption. There is also little evidence that nutritional standards have suffered as a result of the growth of export crops, though sugar in Kenya may be an exception. There are several reasons for this. First, certain services can be in joint supply and help both export crops and food. Among these are extension, marketing, and supplies of inputs. Similarly, equipment and fertilizer can be used to raise the production of both. It can also be the case that similar complementarities exist on the side of demand: the demand for food by the farmers who grow export crops creates a stable market for local food supplies and encourages their increase. For some export crops, such as cotton, a part of the export crop can be used as food, in the form of edible oil, or as feed in the form of cottonseed cake.

In spite of the positive relationship, between export crops and food in some

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conditions, clearly conflicts can arise. Where there has been in the past unwarranted discrimination against food crops, there is a case for removing that discrimination. Colonial governments have tended to favour export crops by improving infrastructure, such as transport, marketing and distribution services, compared with facilities for domestic food consumption. Research activities and extension services also have been concentrated on export crops, particularly if linked to large firms with market power and capacity to process the crops and make profits by raising prices in the face of an inelastic demand. On the other hand export crops have often borne higher taxes than food crops and are more easily controlled by governments, since often they are grown in specialized regions, they have to pass through ports, the buyers are more concentrated, etc. But economists have a bias in favour of trade, whether international or intranational, and against locally consumed food. Such historical biases, where they exist, should be removed.

Some scholars have gone further and have criticized colonial governments for destroying the integrated farming-herding systems which, in precolonial times, protected the ecology while allowing substantial food production. In Africa, in precolonial days, farmers opened their fields in the dry season to pastoralists who brought their herds to graze on the harvested millet and sorghum stalks. The animals were fed through the grazing, they manured and fetilized the soil with their dung, and the cattle hooves broke up the earth around the plant stalks, allowing oxygenation of the soil. The herdsmen traded their milk for the farmer's grain, and people, animals and land were simultaneously maintained. The introduction of monocrop cash production (peanuts, cotton) by colonial governments destroyed this system. In addition, well digging concentrated animals round watering sites and their trampling turned them into small deserts. Post-colonial production further encouraged this erosion of land, and in the view of some contributed to the present famines. It is, however, not clear how the traditional system could have been maintained in the face of a rapidly growing population.

In some cases export crops face an inelastic world demand. Then production should be curtailed and total proceeds raised, unless current price rises reduce future demand, appropriately discounted, by more than present gains. Such reasoning underlies the attempts to design commodity agreements for tea, cocoa, coffee, sugar, spices, etc. Much current research is devoted to raising further the productivity and production of such export crops, not always to the benefit of the growers. The difficulty here is that, in the absence of effective commodity agreements, the national efforts of small countries are not coordinated with those of the growers and exporters in other competing countries.

A shift to export crops sometimes reduces the role of women in societies in which they traditionally produce, prepare and distribute food. In spite of the higher family income earned, this can lead to a reduction in nutritional standards. Sometimes the men migrate to other areas and leave their families with less food. But few generalizations are possible. Sometimes women increase

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their labour in food crop production to compensate for the reduced labour of men, sometimes producing surplus output for sale, thus raising both their income and their independence. A case is reported from Cameroon where men took up cocoa, coffee and bananas, abandoning the food farms they had previously cultivated. Women took up the slack. But the women grew the food crops in an entirely different way from the men, using a system of cultivation which involved small, daily outputs of labour throughout the growing season, in contrast to the men who had cultivated a combination of crops, requiring occasional short peaks of concentrated labour. The result was an increase in total output, of export crops and of food crops, where the additional food was grown by fewer people (only women) who used more labour-intensive techniques than the average labour intensity of men and women combined in the past.

The impact of changes to export crops on (a) expenditure patterns as a result of cash accruing to different members of the family, and in large, discontinuous lumps rather than as a steady flow, (b) distribution of food to different members of the family, and (c) the allocation of time and effort by women to different types of work, are important areas of study. On the other hand, a shift to export crops may raise employment opportunitites and therefore offer more people access to food. Jute is produced more labour-intensively than rice. A shift from rice to jute in Bangladesh therefore creates more jobs and contributes to better nutrition.

A good deal depends on the distribution of land and the mode of agricultural production. If export crops benefit large plantations or commercial farms, whereas food is mainly produced by small farmers or their wives, a switch to export crops can aggravate inequality in access to resources, income earning power and land ownership. (Examples are sugar in Jamaica and cotton in El Salvador, but even in Africa the trade bias has favoured the large export-orientated farm and firm). Export crops are often grown more efficiently in large farms, and the change-over can lead to an impoverishment of small farmers. In African countries, additional export earnings tend to increase the income of small farmers, and the extra foreign exchange contributes to the ability to break bottlenecks in transport and agricultural inputs, which are important for food production. This was certainly the case in Tanzania in the early eighties.

How much should be devoted to export crops is also determined by trends in the cost of international transport, which in turn is affected by oil prices. The lower these costs, the stronger the case for international trade. Expectations of higher future transport costs, other things remaining equal, would justify a move towards reduced dependence on foreign trade.

Foreign exchange is often one of the scarcest resources, while its increase can make fuller use of many domestic resources possible and contribute to greater food production, as well as to higher imports of food itself. It has already been mentioned that it is sometimes possible to increase the production of both export crops and food for domestic consumption, particularly if improved technologies are introduced. In some cases the opportunity costs of

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increasing exports are very small, and the choice does not arise. Land may be plentiful, and little labour and other inputs be required. Where domestic food production does decline, it is possible to encourage home gardens simultaneously with the expansion of export cash crops to ensure continuing adequate nutrition. A Kenyan Ministry of Health study of 1979 showed little evidence that four export crops (coffee, tea, cotton, pyrethrum and sugar cane) had been detrimental to nutritional status. We have seen that the only possible exception was sugar cane.

However, some qualifications are needed to the notion that resource allocation should be guided by comparative advantage, so that a comparative advantage in an export crop can buy more food from abroad than would be produced at home. The comparative advantage is not God-given but itself determined by the direction of research, and research has been heavily biased in favour of export crops and the staple grains, to the neglect of 'inferior' food such as millet, sorghum and cassava. With the growing importance of human capital, the direction of comparative advantage can be quite strongly influenced by research, extension services, education, and other forms of investment in human beings. It is no longer only or even mainly 'endowments' that determine specialization in international trade, but conscious policy decisions.

Recently, there have been some successes in research on these 'inferior' food crops. In Zimbabwe hybrid varieties of maize, in the Sudan high-yielding, drought-resistant strains of sorghum, and in Nigeria a disease-resistant variety of cassava with three times the yield of native strains, have been developed. But a complete elimination of the bias in favour of export crops, combined with the provision of credit and delivery systems, would change the comparative advantage and convey benefits to poor people. There is also some evidence that poor people are more likely to produce the things they themselves consume, and to consume the things they produce. There are several reasons for this. First, when households switch from semi-subsistence cropping for their own needs to monocropping for export, their incomes may rise but their nutritional status drop. Second, monocropping for export may raise the risk of crop failure, even though the average returns are higher. Third, export crops often take a long time to mature, and the outcome may turn out to be less profitable than expected. Fourth, there is a distributional consideration in favour of growing food. There are two dangers in simply raising the productivity of the poor by switching to export crops.

First, there may not be adequate demand for the things they produce, or export taxes may be levied, or marketing margins may be high; and, second, the price of food, on which they will want to spend a large part of their income, may rise sharply, particularly if the change involves shortages of food in local markets. These two dangers are more likely to be avoided if the poor can meet their own needs in somewhat more self-sufficient units than would be indicated by a strict application of the theory of exchange and comparative advantage. This applies to families and households, to villages, to nations and to groups of

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poor nations. There are distributional advantages in this mutual meeting of basic needs which have to be set against the conventional claims of the aggregate gains from trade, which may be greater but less well distributed, more uncertain, or longer delayed.

In some countries such as Zambia, Mali and Tanzania, a dilemma arises. The above arguments for encouraging smallholder production of food for local consumption are strong. At the same time, foregin exchange scarcities constitute a bottleneck to expansion because they reduce the availability of consumer goods, fuel, transport equipment and fertilizer. If productivity in food production is to be raised, growth of inputs is necessary, and this frequently depends on importing these inputs. Productivity growth depends crucially on moving towards machinery, fertilizer and pesticides which often have to be imported and cost foreign exchange. Imports have been scaled down to the minimum, so that, without extra aid, an increase in exports is the only solution. Local food production and consumption cannot be raised without raising exports, but exports can be raised only by curtailing food for local consumption. Non-project, untied foreign aid combined with the right policies can transform this vicious circle into a virtuous one.

Generaliations, such as export crops are grown on large farms, food crops on small; export crops are grown as monocrops, food crops in diversified farming enterprises; or use more or less female labour, are quite impossible to make, though they are often made. Some progress has been made by combining output, sales and methods of production in different ways. The best guideline is to avoid dogmatism on this issue and to promote policies that raise and stabilize the incomes of poor people, whether through exports or food for domestic consumption or both, and to make sure that they have access to the food.

To sum up the controversy: the passionate opponents of export crops, the value productivity of which is often higher than that of food production have, on the whole, not provided good reasons for their attack, but there is a kernel of truth in their criticism of the advocates of comparative advantage as a guide to foreign trade. This can be summed up under the following headings:

1. Comparative advantage can change, particularly as a result of changes in the direction of research and human capital formation.
2. The institutional arrangements as to who benefits from foreign sales (government through export taxes, parastatals, foreign firms, plantations, large commercial farmers) and from domestic production of food (small farmers) make an important difference.
3. Local production and local markets of food can be harmed or destroyed by foreign trade. In spite of higher earnings to the country, local food prices may rise or certain foodstuffs may cease to be available. But local self-sufficiency in food, like national self-sufficiency, may also harm the poor.

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4. Higher incomes to the growers do not always mean that nutritional standards of all members of their families are improved.
5. Export crops sometimes carry higher risks in production, the costs of foreign transport, and foreign demand.
6. The distribution of benefits (and power) between men and women, and between government and private agents, may be different.
7. Foreign trade contributes to a change in tastes which can make the country both more vulnerable and reduce nutritional standards.
8. Monocropping for export can be ecologically harmful.
9. In many situations experience has shown that food and export production are not alternatives but complementary

.Distribution of food within the family

In the past, it tended to be assumed that if the head of a household earns enough income to feed all members of his family, they will be adequately fed. More recently, the distribution of food within the family was more closely examined. The results are still controversial. According to some, women and children, especially girls below 4 years old, are discriminated against in favour of adult men and boys. According to others, such discrimination is greatly exaggerated. Where children and women receive less food than adult men, this can be partly explained in terms of their lower requirements, their working less or their lower productivity. It is generally agreed that in some cultures, such as Bangladesh and Northern India, girls below 4 are suffering from food discrimination. Of course, there are disproportionately many small children in poor families and they are among the most vulnerable groups. It may also be that poor families have to concentrate on feeding the member most likely to bring in earnings, and that is often the male adult. In Africa, female children are favoured compared with males. In many cultures it is the women who dispose over food; they control grain stores and deplete them to feed themselves and their families. It is not likely that they will be entirely subservient to the selfish demands of their husbands.

If poor families suffer from hunger and undernutrition, it is not always best to raise their income, however desirable this may be on other grounds, if we are concerned with raising the nutritional status of their children. The GOBI package designed and propagated by UNICEF—growth charts, oral rehydration, breast feeding and inoculation—may be a more effective and quicker way to improve children's nutrition, where they had been suffering from diarrohea.

Seasonal fluctuations in food consumption increase the damage both by making the shortfalls worse for the very poor, and by increasing their number compared with a count taken on an average day. The range of benign adaptation for any given individual is likely to be exceeded, and more individuals will drop into the group of severely undernourished. In Gambia, for example, women's weight declined between pre-harvest and post-harvest seasons by 5 kilograms, and food intake per day was 60 calories lower. In Bangladesh the difference in

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calorie consumption per kg dropped from 62 to 50. Some of these variations may be planned. The variations may correspond to variations in required work or to the high cost and wastage of storing food. Temporarily raising body weight may be the best way to overcome these difficulties. As we have seen, there may also be a range of benign adaptation. But for very poor people the shortfalls indicate serious stress, particularly since the periods of low intake coincide with increases in diseases and infections and higher prices of food bought.

Engel's and Bennett's Laws

There are several regularities in food consumption, which have been formulated in "laws". Engel's law states that the proportion of a family's budget devoted to food declines as the family's income rises. Although it is sometimes derived from the proposition that the capacity of the stomach is limited, it should be noted that it is expenditure, not amount of food eaten, that Engel's law applies to. Calories consumed level off well before expenditure. The law does not apply to very poor families, whose expenditure rises proportionately or even more then proportionately, as their incomes increase. It is between 80 and 85 per cent of their total outlay. The poverty line has at times been defined as that level of income at which the proportion of expenditure on food begins to decline. It is among members of the group below this poverty line that the risk of nutritional damage is greatest.

Bennett's law states that the ratio of starchy staple foods consumed declines as incomes rise. Starchy staples, comprising mainly grain and root crops, are the cheapest form of food. As incomes rise, families diversify their consumption into dearer calories. The quality of food, measured by prices paid for it, rises with income. When income is calculated for the purpose of testing these laws, addictive expenditures (e.g. on cigarettes) and interest on loans may have to be deducted before determining available income, for they do not represent discretionary components of income. While Engel's law refers to expenditure on food, relative to income, Bennett's law refers to sources of food calories relative to income. A third law says that the average quality of food calories, measured by prices, rises with incomes.

Until recently the number of undernourished people was greatly overestimated as 40–60 per cent of the population in low-income countries such as India or Nigeria. The true figure is nearer 10–15 per cent. The reasons for past overestimates are many, but largely an overestimate of required calories, neglect of the ability of people to adapt, within a range, to lower food intake without damage, and various statistical reasons relating to differences in climate, work load, and age- and sex-structure. Food requirements depend not only on climate, work, age, size and sex, but also vary both between individuals and for any given individual for different times. People can also adapt, within a range, whose width is controversial, and for a time, to lower food intake without damage. This does not mean that there are not many more deprived people than undernourished people. The 40–60 per cent may well lack many of the

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ingredients that make human life worth living (adequate shelter, schooling, health services, productive assets, power) and they may suffer from time to time from hunger and deprivation. But they are not chronically undernourished, and they require different projects and policies. The poor need more and better schooling, safe water, better health care, more productive assets and more power. But food deficiency is not their main problem. Giving them more food may simply leave them poor and fat. It is, however, the main problem for the ultrapoor whose principal need is higher nutritional status. These ultrapoor spend, as we have seen, 80–85 per cent of their income on food, and this ratio does not fali as their income rises. They also consume very cheap, especially cereal calories, whereas less poor people spend large portions of increases in incomes on tastier and dearer calories.

Weight for height (in adults), height for age and weight for age (in children) are measures of undernutrition. Extreme shortfalls can lead to impaired physical development, leading to stunting, threatening mental development and even survival. But to feed more to children suffering from only moderate shortfalls may only lead to obesity. Other measures, such as better schooling, safer water or better health care deserve higher priority. Provided weight for height is adequate, low height for age probably has few disadvantages for adolescents and adults.

It might at first be thought that if people have enough income to buy adequate amounts of food for all members of the family, hunger is absent. But adequate income is not enough. For any given level of income there are wide variations in nutritional standards achieved. First, average income for a country may conceal wide differences in the distribution, and countries like Libya or South Africa, with quite high incomes, include many people below the poverty line. Second, the relative price of food may be different between countries and income groups. Even though total income is adequate for one country or one income group, higher prices of food, even though compensated by lower prices of other goods, put these groups at nutritional risk. Third, for the same income level, the amount and quality of social services, particularly health and education, provided free, will vary between countries, so that for the same income level and income distribution, different performances will be registered. Fourth, there are gaps between income received and available for expenditure which are due to constraining obligations such as rent, interest payments, and perhaps some forms of addiction such as smoking. Fifth, food needs will vary according to the size, age, and sex composition and the amount of work of members of the household. Sixth, even for the same age, sex, climate and activity food needs vary for different individuals and for the same individual at different times.

International Trade in Food

In the last twentyfive years (1960–1985) international trade in food increased both absolutely and as a ratio of total food supplies. In 1960 world

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imports of food were about 8 per cent of production, in 1985 12 per cent. Food imports by developing countries doubled in terms of calories per head in the 1970s and then increased very little in the 80s. By the mid-eighties imports provided about 15 per cent of their total food calories. This growing dependence gave rise to serious problems. Commercial food imports cost foreign exchange. Some developing countries were faced with serious debt service problems. At the same time the prices of their export commodities had fallen to all time lows. Not only had domestic agriculture been discouraged by subsidized food imports, but tastes had been changed in the direction of wheat (of which imports by developing countries rose two and a half times in the 1970s), away from the commodities that could be produced in the developing countries economically.

As we have seen, by and large, the advanced and richer countries have taxed the majority of relatively less well-off urban consumers to subsidize the better off minority of food growing farmers. In the poor, developing countries, the relatively poorer rural population, including the food growing farmers, have been exploited to subsidize the better-off urban communities. As a result, the world has produced large food surpluses in the advanced countries. Some of these have been used for food aid, others for commercial sales to socialist and developing countries.

But these policies have not been the only cause of the growing food exports from the developed to the developing countries. There are more fundamental forces at work. In the advanced countries, higher incomes are not spent on food. The growth of agricultural output due to research combined with the difficulty of redeploying resources from agriculture to other sectors, leads to a tendency to overproduce and export. In the developing countries, on the other hand, a large proportion of higher incomes is spent on food. Paradoxically, in those developing countries where domestic food production is growing fastest, the demand for imported food also grows rapidly. This is so because of the multiplier effects of agricultural growth on incomes and the demand for food, the autonomous growth of demand in other sectors, as well as the need to import feed stuffs for cattle. Demand for food and feed rises even more rapidly than the domestic supply of food. It is therefore the middle income developing countries, in which food production has grown rapidly, which have been the booming markets for the food surpluses of the advanced countries.

Food Aid

International food aid can play a useful part in alleviating hunger in low-income countries, although its beneficial role has been disputed. Most obviously in cases of disaster, whether natural or man-made, it can provide emergency relief. Its role as a more permanent instrument of policy is more controversial, particularly because it can reduce incentives to grow food domestically, and therefore aggravate the longer-term problems of hunger.

There are at least seven criticisms that have been made of food aid, other than emergency famine relief. First, it reduces the pressure on recipient

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countries to carry out policy reforms, especially with respect to producer incentives and nutritional objectives. Second, it tends to depress domestic farm prices, to discourage domestic agricultural production and to reduce the spread of production-increasing agricultural technology. Third, it is unreliable, because it depends on donors' surpluses. When needs are greatest, i.e. when prices are high, it tends to dry up. Thus, in the plentiful year 1970 annual food aid exceeded 12.5 million tons, whereas in the food crisis of 1973–4, when the price of wheat rose by 50 per cent, annual shipments fell to below 6 million tons. Not only the amount and timing but also the country distribution serves the political, economic and military interests of donor countries. Thus in 1982 and 1983 Egypt received 18 per cent of the food aid distributed by the Food Aid Convention. Moreover, since donors make their allocations in terms of money, higher prices buy a smaller amount of grain. Fourth, if administered through state agecies, it is said to reinforce state hegemony over people and does not reach the poor. Fifth, it promotes an undesirable shift in consumption patterns away from staples and towards wheat and wheat flour. Sixth, it disrupts international commercial channels. Seventh, it leads to unfair burden sharing between donors, if the price of food contributions is overvalued.

The principal objection, that it discourages domestic agriculture by depressing prices, can be met by using the counterpart funds from the sale of the food aid at market-clearing prices to make deficiency payments to the farmers who would otherwise be injured, so that supply prices are restored to the level at which they would be without the food aid. (Even food distributed free, say in schools, frees budgetary revenue if the government would otherwise have paid for it.) In this way the amount by which expenditure on food aid reduces demand for domestic food is channelled back to the farmers and incentives are fully restored. The reason why this obvious solution has not been adopted more frequently is the budgetary/political constraint. Financially straitened governments normally find other uses for the collected revenue of greater importance and cannot, or do not wish to, collect additional revenue. The argument that counterpart funds should be used for deficiency payments to farmers applies also to subsidized food imports, or to those admitted at an overvalued exchange rate.

Food aid can also be used to finance additional food consumed by construction workers on infrastructure projects for agriculture. Or food aid can be linked with other forms of agricultural assistance to avoid neglect of agriculture. Or additionality of demand can be ensured by distributing the food or its money equivalent to the poorest households who could otherwise not afford it. But the importance of the charge has been greatly reduced, if not entirely eliminated, by the fact that many developing countries have become substantial food importers. (Only in low-income African countries is food aid increasing as a proportion of food imports.) In such a situation the traditional roles of food aid and financial aid are reversed. Food aid, in so far as it replaces commercial purchases, becomes fully convertible foreign exchange, whereas

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financial aid often remains tied to procurement, commodities or projects. It has, however, been argued that the free foreign exchange made available to governments presents an obstacle to fundamental reforms, such as devaluation of the exchange rate, or investment and reforms in agriculture, which would raise food production. This is not, however, an argument against food aid, but against all forms of intergovernmental aid. Such aid can be used either to support or to delay reforms.

Food aid can be used either as balance of payments support or as budgetary support. The two extreme cases are, first, where the food aid is wholly additional to commercial purchases and is sold by the government in open markets at market clearing prices, yielding government revenue in the form of counterpart funds of the maximum amount; or second, where the food aid wholly replaces commercial imports and the foreign exchange saved is used to buy other imports, or more food, or to repay debt.

Historically, there are many instances of food aid that did not harm domestic food production. Forty per cent of Marshall Aid consisted of food aid, yet European food production flourished, excessively. Similarly, South Korea, Israel and India received large amounts of food aid, without apparent long-term harm to their agriculture.

The charge of disruption of commercial sales is greatly reduced by the shrinking and now small role of food aid in total world food trade. If food aid wholly replaces commercial sales by the donor (the government pays the farmers what they otherwise would have earned) no disrupting effects on sales by other countries are suffered. Ensuring additionality, e.g. by linking it with job creation for poor people who spend a large portion of their income on food, also reduces the damage to commercial sales.

Additionality of supply is also important in order to meet the charge that advanced countries that are commercial food importers are faced with higher prices than if, in the absence of food aid, the food had to be sold through commercial channels, lowering prices. The valuation of the food aid has to be done in such a manner as to ensure fair burden sharing between food surplus donor countries and food importing donor countries.

Another charge against food aid is that tastes depend, to some extent, on relative prices and food availabilities (and are not given exogenously, as is often assumed in economic analysis). A prolonged policy of finer grain imports changes tastes away from domestically produced food stuffs and, it is alleged, increases dependency on foreign supplies. The situation has been described as analogous to drug addiction, countries becoming "hooked" on grain. It should, however, be remembered that these changes in tastes have many causes, connected with development and urbanization, with commercial import policies with the growing value of time as incomes grow, and reduced time available to women to prepare food as they join the labour force, and that food aid is only one, possibly small, contributory cause.

The volume of food aid has been greatly reduced in the last twenty years.

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Food aid has, however, increased since 1975. In the sixties it had been as high as 16–17 million tonnes in some years. In 1973–4 the cereal tonnage had fallen to 5.5 million tonnes. In 1976–7 it was 9 million tonnes and in 1984–5 had risen to 10.4 million tonnes. The 1985–6 figure is higher because of emergency aid to Sub-Saharan Africa. There has been an increasing proportion of non-cereal food aid, not covered by these figures, especially EEC aid in diary products. The aid component in food aid has also increased and more has gone to the poorest countries. Africa has benefited at the expense of Asia, and within South Asia Bangladesh at the expense of India, and project and emergency aid have replaced bilateral programme aid.

At the same time, so-called subsistence crops such as sorghum, millet, yams, cassava and bananas could be traded in local and even national markets, if they were not discriminated against. Low prices of subsidized grain, the import of which is encouraged by overvalued exchange rates, or which is supplied by food aid, discourage the production of these "poor man's crops" for the market. Although devaluation would encourage the production of export crops, the demand for the subsistence crops would also rise and would constitute an incentive to produce more. The precise amount would depend on the elasticities of substitution in supply and demand. Relatively little research is done on these crops, although there are some exceptions, such as sorghum in Maharashtra and the Sudan, and maize in Zimbabwe. The International Institute for Tropical Agriculture in Ibadan (Nigeria), which is part of the system set up by the Consultative Group for International Agricultural Research, specializes in research on roots and tubers. But more could be done for these crops, especially millet and sorghum. Even where research on food crops has been successful, African countries lack the indigenous research capacity to adopt and adapt the results of this research, so that much expenditure on research has low yields.

To give greater encouragement to research on subsistence crops would have the advantage that they can be grown on marginal land, do not require a sophisticated technology or complex skills, are ecologically benign, and have frequently great nutritional value. They can also be used to supplement the more preferred cereals when these are in short supply through additions to wheat flour or maize meal. But even if research in this area were to yield good returns there are limits to what can be expected. These crops, particularly roots and tubers, are bulky and expensive to transport. Storing and processing them is costly and often capital-intensive.

The various criticisms that have been advanced against food aid have led to the recommendation of better alternatives. Among these is a financial insurance scheme. Countries would then be able to buy food in commercial markets, and not be dependent on the political vagaries of donors. Unfortunately, such insurance schemes have not been very successful in the developing world, largely for the well-known reasons of adverse selection and moral hazard. The International Monetary Fund's Compensatory Financing Facility mentioned above was extended in 1981 to apply to cereal imports. The criticism of

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unreliability of supplies can also be met by multi-year commitments of grain at flexible delivery. These can be bilateral or by groups of donor countries.

Food aid, properly designed and administered, is only one way in which the international community can help poor people in poor countries to be better fed. But its success depends on the ability to match the motivation and mobilization of food surpluses from advanced countries to the food needs of developing countries. A more sensible approach would be for the international community to support efforts by developing countries to eradicate hunger. Many domestic measures aiming at this entail difficulties. A land reform, giving land to the tiller, may cause a temporary drop in food production. A tax reform may lead to capital flight. Redistribution of income through employment generation may lead to inflation, balance of payments difficulties, strikes and capital flight. If the international community is serious in wishing to eradicate world hunger, it would provide resources to the reforming governments to tide them over such temporary crises and difficulties. They would be like the present Structural Adjustment Loans of the World Bank; only they would be Radical or Reformist Adjustment Loans.

The Limits of Food Supply

We have seen that for a long time, people have expressed concern that population growth will outrun food supply and force people to starve. In fact so far food has increased more rapidly than population. In the last quarter century, 1800 million additional people were born into this world. Agriculture has responded to this by producing enough food and better quality food for these extra people. While certain regions, such as Africa, and certain groups, have faced shortages, global quantities and qualities have not fallen short. Fears in the early 1970s of chronic global food shortages have proved wrong.

This does not mean that we can be complacent about food supplies. There are limits to raising food production. Environmental threats arise from the package of fertilizer, irrigation, pesticides and mechanization. Water is becoming a very scarce resource. The chemical effects of fertilizers can be hazardous. Pesticides also threaten human health. Forest clearance, slash- and-burn agriculture and cropping on hillsides in arid zones have led to soil erosion throughout South America, Africa and South Asia. Desertification is spreading. There are ways of avoiding or at least reducing these threats, without reducing food production. For example, chemical pesticides can be replaced by natural pest predators and resistant crop strains. Terracing, intercropping and agroforestry can reduce soil erosion. Economies in the use of water can be achieved by raising the efficiency of irrigation systems. Pressures on available land can be relieved by more intensive cultivation. But this can lead to erosion, water shortages and fertilizer and pesticide runoff. Erosion can be reduced by no-till farming, but this implies greater reliance on herbicides. Pest control can lead to resistant species. The high yielding varieties make greater claims on

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water, fertilizer and pesticides and reduce the genetic diversities of the wild varieties.

Sustainable food production calls for soil conservation and erosion control; more organic rather than artificial fertilizer and recycling of plant and animal wastes; conservation of water resources; more efficient irrigation, re-use of water, and crops of less water demand; promotion of diversity of biological strains in agriculture and symbiotic relationships between cultivated and wild biota.

Many of these ecologically sound policies coincide with policies for greater equality. Ecologically sound techniques are particularly appropriate for small farmers. A land reform redistributing land to small farmers would also generate the demand for food crops.

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REGIONAL DEVELOPMENT AND ECOLOGY

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I

Space, being a universal category and the comprehensive processes which take place in it, needs to be approached through aspects of space, natural processes, contents in space to human being. All the natural, economical, social, sociological, demographical, ecological and other contents in space may be individually marked and distinguished, and, on such basis, narrower and wider spaces may be classified. Various space differences and characteristics have a dynamic aspect, which can be seen through methods and the ways of production and usurpation of natural resources, and intensity of impact on space and natural goods. The natural resources adaptation to human needs is intensified and technology development changes the usefulness of the contents in nature. Scientific-technical progress enables us to comprehend better the limits of unrenewable natural resources and their usefulness. At the same time, technical progress has an impact not only on explication of natural resources and on increased abilities for growth of economy, but also on natural welfare protection and greater investments in eco-system protection.

Human aggression towards natural resources has left great consequences on natural environment and natural resources, threatened their durability and made further existence of civilisation uncertain. The preferences and relations between people and nature have changed from exploitation and degradation, to need for investments in natural resources, their protection and reasonable use. The ownership function on these resources has, obviously, taken new dimensions and motivation, and the meanings of individual benefits and adoption have been changed into common quality of living conditions and environment protection.

After the process of space localization, the development of science, technology, communications, movements of goods and people in space, delocalization and internationalization of space have taken place. The process of delocalization is intensified with enhanced ecological problems and innumerable noxious interventions in space which endanger the sheer survival of mankind.

Increased mobility of factors and other contents in space stipulates: (a) diminishing of spatial separation and diversification, and, thus, internationalization of narrower and wider (from the aspect of different political, social and economical diversifications) spaces, (b) intensified use of natural resources and

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their economic valuation, and (c) signified claims on rational use and protection of nature.

Present contrasts contained in exploitation of natural goods and maximization of growth on one side, and preservation and protection of nature on the other, have to be transformed into a complementary process which makes space for improving of socio-economic development but also appreciates the need for keeping the vital functions of nature unchanged. This induces the processes of delocalization of nature, production, demographical, sociological, ecological, political, monetary and other spatially marked contents. Such relations in space and delocalization processes intensified by development are the main concern of F. Perroux (1950).[1]

Spatial allocation of natural and production potentials, people, their different scope of activities in quantitatively and qualitatively determined space show multi-dimensionality of spatial contents and processes. Space, then, is the ambient of territorialization of natural, demographic and man-made potentials which are characterized, in physical sense, by spatial detachment.

Political, natural, demographical, historical, sociological and other differences are the pillars of regionalization of wider and narrower spaces and the delocalization processes need wider spatial analysis. The protection and preservation of nature is an important spatial dimension which occupies the attention of people, but also makes it an important determinant of regional development.

The understanding of regional aspect of development as a group of contents and activities on certain space regarded from economics point of view, has to include, besides intraregional relations, links and global transmission of contents and activities on wider spaces. Thus, the focus of analysis must also include interregional relations.

It is, then, obvious that space and, especially, contents of space are difficult to be bound in strong borders and keep strictly localized, without stress on noxious development effects. Besides organized aims and opening of the mobility processes, they take place directly or indirectly and, so, transmit positive and negative impulses from narrower to wider spaces. The process of delocalization of space contents is more obvious between states, or different groups of states, what makes search and stress on regional localization autarchy absurd.

The processes of delocalization connect spaces and erase neutral borders of spatial contents, and spread links and impacts between narrower and wider spaces. Besides, neutral activity of innumerable contents of narrower spaces on environment is minimized and differentiation of the development processes dynamics and level of realized socio-economical development are increased. Such trends and relations are present between certain spaces with state and national characteristics, but also between narrower national spaces. It is obvious that the environmental policy has a priority in politics as a whole, and, because of territorialization, also in policy of regional development.

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The definition of regional aspect of development is possible to express synthetically starting the following four approaches: firstly, it is essential to start with space defined with a large range of factors which make physical ambient of territorialization; secondly, natural, demographic and production resources in space are characterized by scarcity, allocation and imperfect mobility; thirdly, space may be divided into parts characterized by certain characteristics and, lastly, those characteristics are analyzed from the economics point of view and the possibilities for the mobility of contents and delocalization processes.

Those presumptions make place for synthesis and understanding of regional development as a process which takes place on individually marked and determined spaces—regions, and in spatial interactions of factors of growth and development, what would enable us to find an optimal allocation and mobility of resources, and, on this basis, maximization of prosperity. Economic welfare includes a certain level of satisfying human needs and the environmental quality as an essential component. It follows that the relation towards environment is a complex element of regional development policy.

II

Space is a limited resource in which natural goods, values created by work, people and their activities are placed. Scarcity refers to our ability of locating business and non-business capacities in space as a conditon for life and work of population. The policy of purposes and use of space is based on appraisal and analysis of spatial contents.

The analysis of contents in certain region makes an important presumption for rational location decisions. The fact that contents and activities in space are on concrete and not on some hypothetical spaces, makes it necessary to prevent deterioration of environment on each regional level. The complementarity of natural ambient and growth and development policy on each region: (a) minimizes noxious influences not only on environment, but also on interregional relations connected with delocalization processes, and (b) paves background for making decisions on growth and development and their influence on natural ambient.

The system of common accountancy has failed to record natural resources and condition of reserves of water, soil, air, unrenewable resources, etc., and every development activity has to include appraisal and analysis of spatial contents.[2]

Appraisal and analysis of space make the precondition for eliminating of chaos and building of long-term programs for improvement and protection of nature. Globally made programms on the regional level are also the basis for behaviour of population, entrepreneurs and regional authorities.

The appraisal as a presumption for the analysis of condition and future use of space includes:[3]

(a) Natural characteristics and resources in region is a part of social welfare which is the condition for life and work, and certain resouces are not renewable,

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nor reproductable. The effort to increase national welfare leads to transformation of natural potentials into produced wealth, what changes the functions of the environment and endangers the natural balance. The quality, quantity and abilities for use of natural resources influence the conception of allocation and develop- ment of production in a region.

Natural resources are natural conditions and available raw materials necessary for people to meet their needs and to increase total welfare. We might say that natural resources could be a restrictive factor of development from three aspects: (1) real availability of such resources; (2) as a possibility of use at a level of technological development level; and from (3) natural balance and quality of life point of view. Thus, the benefit from natural resources fluctuates and becomes bigger and more diversified with each scientific-technological effort of man, and less due to ecological dangers which, directly or indirectly, are the result of new technologies used.

Natural characteristics and resources may be regarded through following:

- quantity, quality and structure of land;
- forests and their contents including the specific ones;
- rocks and minerals;
- waters from economic, ecological and interregional aspect;
- geographical location and chances of its economic valuation;
- climate;
- ecological aspect of space which includes condition of land, water, air and other natural resources of vital meaning for life.

(b) The appraisal and analysis of plants of production, infrastructure, culture, sport, recreation and other objects make the basis for the future policy of land use, but also for its protection and establishment. This complex has special meaning and requires precise definition of situation, what may be achieved through:

- production capacities, their structure in various activities of production, with technology in use and its impact on environment;
- social infrastructure objects built in and production potentials for new capacities along with space occupation coverage particularly for energy, traffic, water and the similar;
- objects of infrastructure including housing and communal objects, protected natural systems, cultural contents, sportgrounds, recreational objects, etc.

This element, with precise analysis of economic structure and demographic component, gives an explanation for capital gained and work realized in region. This, besides the study of space and natural resources, constitutes the basic factors of regional growth and development. The analyses of these basic factors and market as a regulator of economic relations, entrepreneurs and free initiative are the key-determinants of location policy. Allocation of production and

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location policy not only influence regional structural changes, but also the ecological aspect of space.

III

Considering all biological and functional processes on land, in the water and in the air under the term "ecology", we may say that it is a science whose main target is to analyze the structure and functions of environment. The production and consumption processes influence on biosphere, lithosphere and (recently by space exploration) the space, is increased.

Recent technological development as a multidimensional phenomenon increases danger of exhausting and degradation of natural resources and points out the biosphere management as a priority for future development.[4]

Entropogenous changes of human environment are, mostly, the result of human activity and influence on environment, so management should become one of the most important determinants of growth and development as a whole.

Dynamic processes of industrialization make an impact on concentration of factors on certain space and also stimulate the urabn flows. Industrialization and urbanization become complementary processes that change spatial image and decrease the ability of ecosystem to adopt numberless contents. The ability of acception of dangerous pollutants and their transformation into harmless shape is especially decreased.

Development of new technologies increase the usefulness of natural resources and enormously increases the natural resource exploitation. Energy is the basis of development of industrialization, traffic and, in global terms, the development of modern society. Human relation towards energetic resources is reliable proof of relation towards nature. This is seen through natural resources exhaustion (oil, gas, coal). The co-product of burning of fossil fuels are CO_2, sulphur dioxide, acid rains, nitrogen etc. It is difficult to find an industry which would not have an impact on water, air, soil, nor on environment as a whole.

The dynamics of development in this century intensifies the processes of urbanization. The intensity is seen through regions turning into big megalopolises. Besides reducing agricultural, recreational and other areas, urbanization devastates environment as a transmitter of mechanical and chemical pollution, but also devastates spatial integrity.

For satisfying individual needs men individualize the most beautiful spaces of the environment (sea coasts, rivers, lakes, mountains with beautiful nature). Thus, he takes them away from other members of the society, and even from future generations.

Upto 1970s, growth and development took little heed to the multidimensionality of impacts on innumerable natural contents and ecosystems, including working and living conditions. Ecology, as a science which follows biological and functional processes on Earth, in water and in the air, and structure and functions of natural systems still has not established closer links with economics, and through it, with economic and social systems.

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Visual and, especially, contentional changes of natural environment endanger living organisms and the survival of mankind. Established chain relations and dependencies in nature react on each imbalance. The food producers (through photosynthesis) provide the possibility of life to consumers, while different bacteria and fungi decompose vegetable and animal wastes.

Such natural rhythm has been transferred to humans and their reactions relating to changes and endangering of natural environment. The intensity of reactions of "environmental protectionists" is highly correlated with the environmental endangering level. So, spontaneous reactions, without stronger political or economic impacts, become, especially in the eighties, the organised concern of the world. This is seen through (a) education of environmentalists; (b) marketing activities; (c) citizens' initiatives; and (d) legal regulations for environmental protection.

Long back started the first era of individual initiatives, which ended with social care for environment. This period is characterized by numberless individual actions of citizens, local societies and international forums (including the United Nations) for creation of organizations and coordination of activities of environmental protection. The basis of all these activities is the fact that technological development is possible side by side with environmental protection. Environmental degradation is impossible to express in money. The maximization of growth without care for health or even human life is a serious question of economic ethics. This is obvious not only in prevention of further pollution, but also in paying the accumulated debts to nature.

The most developed countries make enormous efforts to coordinate technological prosperity and invest into environmental protection. However, the problems of pollution are transferred into the Third World countries, and delocalization effect is forgotten. The gap between pollution and the development level in less developed regions is increasing. The increasing of the gap between the pollution of the environment and the level of development opens the problem of regional development. The investment in modern technologies and protection of environment degradation has to become new philosophy of development in developed and underdeveloped countries.

If nothing else, the mechanisms of environmental protection and financial sanctions for pollutants have limited range. It creates the opinion that citizens of rich and developed regions are creating pollution in underdeveloped regions without care for health and, even, endangering the survival of population.

The noxious impacts escalation from the spaces appropriate for life to uninhabited spaces, and even to outer space, points out the absurdity of tolerating of, so-called, local pollutants and impacts of internationalization of the problem. The increased destruction of the ozone layer was one of the main reasons for the subscribers of the Montreal Protocol to forbid the use of CFC gases. The significance of space and natural environment points out the necessity of founding of centres and making concrete projects for neuralgic spaces on Earth.

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Faster growth and development often minimizes or even excludes the importance of preservation and protection of the environment. Such circumstances are especially present in: (1) insufficient analyzing of development decisions influence on environment; (2) insufficient economical valorization of natural ambient into the growth and development price; and (3) lack of organizational and legal mechanisms for environmental protection.

Natural resources and environmental quality from the interspace point of view is not unified. Different problems exist in each region. Besides natural space characteristics that determine different assimilative capacities of narrower and wider spaces, differences arise: (a) different relations of population towards environment and their abilities to make an impact on development and political processes, what depends on the level of democracy in the society; (b) density of population and production potentials which makes the pollutant quantity bigger and is different on regional aspect; (c) emissions level because of industrial structure, quantity and quality of production and, especially, abatement technology.[5]

Pointed elements have an impact on: (a) environmental quality; (b) the determination of aims for protection and preservation of environment (especially of time dimension). Namely, long- or short-termness of strategies and aims on this field depends on pollutants concentration and material abilities available for improving the quality of the environment. (c) Spatial dimension, that is including of other, in the first place neighbouring regions, in the protection processes, what depends on regional pollutant's delocalization intensity and its impact on other regions and on internationalization of regional external effects.

The development of production forces and their concentration on narrower spaces results in degradation of those spaces. The pollution of those spaces is increased. This is obvious in pollution of biosphere with different gases, especially carbon, nitrogen, sulphur dioxide etc., which are already enormous in certain regions and are in permanent increase. The same situation is with soil degradation caused by natural processes (soil erosion etc.), human activity (modern technology use in production) and water pollution. Besides noted elements, there is an enormous increase of noise in bigger cities. Stronger concentration of production and population decreases the number of untouched nature, indispensable for the survival of the mankind and the need for protection of environment and preservation of wildlands becomes the main task of the regional policy.

Environmental policy is based on appraisal, as well as the choice of measures and activities of economic policy for protection of existing and improvement of endangered natural contents. In the first case it is important to make assumptions on:

- pollutants and emission level;
- concentration of pollution in human environment;
- noxious substances which endanger the survival of flora and fauna;

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- forecasts of future environment condition in case of continued proceses.

The global knowledge on impact and contents in space can be divided into various relevant elements.[6]

The measures and activities of economic policy are based on:

- environmental quality;
- material abilities of the society;
- developing state's functions;
- socio-economic system and methods of influence on development processes.

Measures and activities of economic policy have their roots in legal system and organization of environment and society. The success in environmental policy based on regional level depends on legally defined material and non-meterial sanctions for environment degradation, but also on motivation for environmental protection.

After detailed analysis of status of environment, the policy and measures and activities (defined on the basis of behaviour towards environment) on global, regional, local and individual level have to be defined. The environmental policy includes the behaviour of and sanctions on all participants and towards each participant related to direct and indirect influences on quality of environment. The natural resources are not only goods which man has to adopt to his needs, but also various contents in space which determine the abilities of humans and conditions of life.

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THE EXCHANGE-RATES FORECASTING: A SURVEY OF SOME OF THE THEORETICAL AND EMPIRICAL ISSUES

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To forecast the market clearing exchange-rates reasonably well has been a difficult but very profitable task for businessmen, governments, bankers and even international financial institutions like World Bank, etc. The earlier thinking was mainly the foreign exchange as price of the exportables and importables and that facilitated the flow equilibrium in the international trade at a time when the capital movements were meagre and slow. The situation with the development of modern transport and communications has drastically changed; on the one hand the capital movements have drastically increased and on the other hand the foreign exchange itself has begun to be viewed as an asset. The price of this asset has been, it is said, determined in the 'flex-price market', where the supply and demand factors work so fast and the current or spot rates almost reflect the future expected price. In technical terms the current prices almost reflect all future information which is available up to that time, and therefore, compared to any other information available up to that time, the current price is a better instrument to predict the future price, or to put it in the jargon of econometrics, it may follow a random walk. However, many of the economic theories and insights, like the purchasing power parity, the covered and uncovered interest rate parity, the effect of the money supply changes, the current account of the balance of payments, etc., as translated into the rational expectations of the agents and the time involved for it, are very difficult to understand. Unfortunately, some of those issues are not settled by the economists, like, if the structural models are used by the agents who act as if they predict through the true model of the economy, and then the structural models may, at best, explain the expost data of exchange-rates and they will be failing as forecast models! This happens because the actual process through which those structural models affect the economy is 'short-circuited' by the role of expectation formation by the 'rational' agents.

Two widely cited papers by Meese and Rogoff (1983a, 1983b) were the first studies to provide extensive evidence that existing models of systematic exchange-rate behaviour could not outperform a naive random-walk model or the forward exchange-rate in post sample forecasting tests. Backus (1984)

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concentrated on the exchange-rate between the US and Canadian dollars and tested a number of portfolio-balance models, and he has concluded that the random-walk produced the best post sample predictions. Woo (1985) has worked with a monetary model which outperformed the random-walk model in predicting the exchange-rate between the US dollars and deutsche mark during a forecasting period from March 1980 through October 1981. Boughton (1984) tested the monetary model of Shafier and Loopesko (1983), and found that each of those models could explain only a small portion of observed month-to-month changes in exchanges, but that the portfolio-balance models in general performed better than a random-walk model in post sample forecasts of the exchange-rates of the dollar against both the mark and the SDR currency basket, although the portfolio-balance models did not in general perform better in predicting the dollar-yen rate. Meese and Rogoff (1985) extended the analysis of their first two papers in a number of directions; to mark-yen and mark-pound, dollar-mark, dollar-yen and dollar-pound; to real exchange-rates as well as nominal exchange-rates. The models of systematic behaviour are found to be slightly better than in earlier studies. It would be rewarding to briefly look at the various economic perspectives in the determination of exchange-rates.

Exchange Rates and National Price Levels

The purchasing power parity theory gives the notion that the exchange-rate should equilibrate to a ratio of aggregate price indices for the two countries, or the percentage changes in the exchange-rate should equal the difference between the percentage rates of inflation in the two countries. Even though the PPP does not necessarily imply that the causation simply runs in one direction, although in using the PPP assumption, generally implies that causation runs from changes in the ratio of price indexes to changes in the exchange-rate.

The assumption of continuous or short-run PPP has been the central point for the class of flexible-price monetary models—Frenkel (1976), Bilson (1978,1979), and Hodrick (1978). But by the early 1980s, it was accepted that continuous short-run PPP was rejected by the data. As Frenkel (1985) mentions, "Two episodes in the recent history of the dollar stand out: (a) In 1977–78 the dollar depreciated sharply against the yen, the mark and other European currencies. Contrary to the purchasing power parity doctrine, the change in the exchange-rate was not all matched by a change in relative price levels. That is, the dollar depreciated in real terms . . . in 1980–85 period when the dollar fluctuation was reversed . . . had appreciated in real terms."

A weaker form of the PPP assumption is the hypothesis of a time-invariant value of the expected long-run PPP level, in which the PPP level is defined as the nominal exchange-rate (currency A per unit of currency B) multiplied by the ratio of national price levels (expressed as the price level for country B divided by the price level for country A).

The assumption of time-invariant expectations about the long run PPP level has been a building block for the sticky price monetary models, based on the

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analytic framework developed by Dornbush (1976) and implemented empirically by Frankel (1979, 1981).

Assessments of this assumption of time-invariant expectations have looked for evidence of a tendency for PPP levels or "real exchange-rates" to return towards equilibrium values over time. The coefficients of serial correlation between deviation of a real exchange-rate, represented by a sample mean or trend line and have interpreted the coefficient of serial correlation as one minus the speed of adjustment towards equilibrium PPP level; for example, see Frankel (1985).

In this there is no clear and definite evidence for whether the real exchange-rates follow a random walk or not.

Exchange Rates and Interest Rates

The asset market equilibrium condition of covered interest parity (CIP) is very simple:

$$\frac{(f-s)}{s} = rf - rd$$

f = foreign currency per unit of domestic currency for future delivery in the forward exchange rate.

s = spot exchange rate of foreign currency per unit of domestic currency.

Under the assumption of risk-neutrality, the uncovered interest parity condition would be

$$\frac{(s^e-s)}{s} = rf - rd$$

s^e = the expected spot exchange-rate where $s^e - f > 0$

It is now in general accepted that observed deviations from CIP reflect transaction costs, the influence of capital controls, etc.

The deviations from CIP are usually negligible when Eurocurrency data are used as measures of interest rates. To the extent that expectations about future spot rates are not observed directly, many tests have been conducted on the assumption of the rationality of expectations, such that uncovered interest rate parity implies that forward rates were unbiased predictors of future spot rates. But, unfortunately, it has been concluded by many researchers (for example Cumby and Obstfeld, 1984) conclude that, "The forward premia contain little information regarding subsequent exchange-rate fluctuations." But the uncovered interest parity is not necessarily by finding that forward rates are biased predictors of future spot rates. Since bias can emerge whenever rational market participants had repeatedly expected exchange-rates to change in response to a policy action or some other event that repeatedly failed to materialize over a considerable part of the sample period, which is known as "Peso Problem" (Rogoff, 1979 and Kraskey, 1980).

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Fama (1984) has also discovered empirical evidence of a negative covariance over time between risk premium and the expected change in the corresponding spot rate, and found evidence, conditional on the hypothesis of market rationality, that during the period from the end of August 1973 through the end of 1982, the variance of the risk premium exceeded the variance of expected changes in the spot rate for exchanges of the dollar against each of the ten other major currencies.

Exchange Rates and Balance of Payments

During the time of Bretton Woods, even the exchange-rate expectations were based on the current account disequilibrium, the flow approach to the balance of payments and the current account were the main factors influencing the exchange rates. But during the floating regime, the situation has changed completely and the capital flow became the main factor, endogenous and sometimes exogenous as well, and it has led to the asset approach to the exchange-rate determination. Kouri (1976) made an important contribution to integrating the condition for flow equilibrium in goods market and stock equilibrium in the asset market. The exchange-rate influences the current account balance and hence the change in the net foreign asset position in turn feeds back to influence the path of the exchange-rate that maintains continuous asset equilibrium over time. The conceptual developments during the 1980's have been bringing the current account back into the analysis of exchange-rate determination by emphasising interactions between the expected long run level of real exchange-rate.

The integration of the current account and capital account approaches to exchange-rate determination has been done through putting the long term factors, viz., the long term real exchange-rate which is caused by the time preferences of the people for savings, investment, etc., and the short term exchange-rate that is caused through the portfolio-preferences of the people for various assets like money and bonds, both native and foreign, which are not perfect substitutes. It may be noted that the old flow approach to the balance of payments and exchange-rates, assumed open-interest parity theorem, and when the flow approach is looked at in the perspective of the open-interest parity theorem and perfect substitutability of assets, the demand for foreign exchange becomes the derived demand for foreign goods and when the exchange-rate is fixed, they become long-term factors which determine the balance of payments. On the other hand, the portfolio-balance model assumes that the assets between countries are imperfect substitutes, and the imports and exports cannot adjust instantaneously, or the current account is predetermined during a short period, say, a day. If economic agents decide on a particular day that they want to increase their net foreign asset holdings, they will not be able to do so instantaneously because the current account cannot change instantaneously. The net foreign asset position is essentially fixed. Therefore, the exchange-rate will

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have to adjust instantaneously so as to make sure that agents willingly hold the existing stock of net foreign assets.

In the portfolio-balancing framework, suppose an unexpected monetary expansion occurs. This lowers the domestic interest rates. The economic agents will therefore try to switch out of domestic assets into foreign assets. But, in the short-run, domestic agents as a whole cannot increase their net foreign asset position, because current account cannot react. As a result, the exchange-rate will have to jump up sufficiently so that the purchase of foreign assets is made unattractively expensive. The depreciation of the currency will then start a dynamic process tending to improve the current account. Over time, therefore, domestic residents will have to accumulate foreign assets. As the current account improves, the domestic currency appreciates, as the portfolio balancing model does not assume the open interest parity to hold and it allows for risk premiums. In order to hold more of foreign assets some incentives would have to be given in the form of a lowering of the price of the foreign currency. Both the short-term variability of the exchange-rates and the fact that nominal and real exchange-rates are highly correlated, can be explained rather well by the portfolio-balance model, as the exchange-rate reacts much faster than the price level. One can try to invoke the "overshooting" effect initially, and then gradually the overshooting effect will be eliminated or at least reduced. This "overshooting" hypothesis presumes the regression of the exchange-rates to equilibrium purchasing power parities, etc., in the long run. But against the "overshooting" hypothesis, Goodhart (1988) argues like this, "The real problem that we may have to explain in the forex market over short periods is not why it—jumps so much, but why it more regularly appears to underreact to 'news'. While I accept that the Dornbusch "overshooting" model provides a good story of why the market might overreact to 'news' in fact, at least in frequencies longer than hourly.... Per contra, the same theoretical model has the lower-frequency, long-term evolution of real exchange-rate firmly anchored by PPP. Here the evidence is rather reverse. While the theory exaggerates short-term volatility, it seems to understate long-term misalignments. The stabilizing pull of equilibrium conditions is apparently less than most economists would have expected". In this context, one of the empirical issues, has been whether real exchange-rates also follow the random-walk property, apart from the commonly accepted proposition that the nominal exchange-rates follow the random-walk model. Frankel and Meese (1987) argue, "Thus in our view the evidence for a unit root in real exchange-rates is much less convincing than the evidence for a unit root in nominal exchange-rates, suggesting that PPP is still a reasonable anchor for long run exchange-rate expectations".

The reliance on ad hoc assumptions, such as static expectations or perfect foresight, could be an important part of the explanation for the poor empirical performances to date of portfolio balance models of exchange-rate determination, in which assets denominated in different currencies are perceived to be imperfect substitutes. One of the important points of interest in empirical

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estimates of portfolio balance models has come from the policy issue of whether sterilized exchange market intervention—by changing the stocks of outside assets denominated in different currencies—can have significant influence on the exchange-rate. In addressing this issue it is important to distinguish between two channels of possible influences: through changes in the exchange risk premium or the deviation from the Uncovered Interest Parity per se, and through changes in interest rates or revisions in expectations about future exchange-rates as a result of changes in perceptions about the future levels of monetary policy variables or other relevant factors. Almost all tests have relied either on the assumption that exchange-rate expectations are static or on assumption of perfect foresight, under which the expected future spot rate is represented as the realized value of the future spot rate plus an error term that behaves independently of any revisions in expectations about the future values of exogenous variables. Reliance on the assumption of static expectations can be criticized for ignoring informantion about the structural model as well as possible inferences about the expected values of the exogenous variables. Reliance on the assumption of perfect foresight can be criticized to the extent that no attempt is made to take account of the types of "news" that can be presumed to induce revisions in expectations about exogenous variables; the assumption of perfect foresight is difficult to reconcile with the notion that much of the variations in asset prices can be attributed to "news". It is criticized that the empirical work on portfolio-balance models has not found strongly significant evidence that the risk premium behaving systematically may in part reflect the reliance on inefficient approaches for capturing expectations about future exchange-rate.

The conventional regression models analysing the simple efficiency hypothesis in the forward foreign exchange markets handle the risk premium in an implicit manner. They regress realized values of rates of appreciation on a constant and a forward premium. The null hypothesis, for the test of no-risk premium, based on perfect foresight and rational expectations, is that the constant term in the regression is equal to zero and the slope coefficient is equal to unity. This joint hypothesis has been rejected in most studies as it has been found that the value of the slope coefficient is typically negative. It has generally been interpreted as a risk premium. There is also a negative correlation between risk premiums and expected rate of appreciation. The empirical work on portfolio-balance models has not found strongly significant evidence that risk premium behaving systematically may in part reflect the reliance on inefficient approaches for modelling expectations about future exchange-rates. Recently, of course, advances in computer solution algorithms have made it possible to model the exchange-rate expectations in a forward looking manner—Tayler (1987), Liverpool Model (1984), MINIMOD (1986)—all of them impose the uncovered interest parity assumptions.

One of the important issues in the context of the portfolio balancing models is the question whether it is adequate to treat assets as perfect substitutes, as in

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the case of the uncovered interest parity assumption, which will be equivalent to describing international portfolio positions simply in terms of the net foreign asset position or the cumulative current account balance. This issue is also important in the context of the today's debt-burdened developing countries—the gross foreign asset position of the countries do not appear to be generating streams of income that are available for making payments on the gross external liabilities of those countries. In the general equilibrium framework, when imperfect substitutability is considered, the simplicity of the uncovered interest parity, the substitutability of assets and the exchange-rate expectations is given up in favour of complex modellings.

The Hypotheses on Exchange-rate Expectations and the Use of Survey-data

In this context, it may be interesting to see that Frankel and Froot (1987) have used the survey-data to test the standard propositions regarding exchange-rate expectations. Survey data provide a measure of exchange-rate expectations superior to the forward rate in that no risk premium interferes. The most popular of the exchange-rate forecasting models—the random walk model—assumes that the exchange-rate expectations are static for a lack of better alternative, that is, that expected depreciation is zero. This seems to imply that investor's expected depreciation is not a very interesting variable, that it does not differ very much from zero and is not very responsive to change in the contemporaneous information set. However, a very different impression of the relative importance of expected depreciation as a component of the forward discount is given by three of the surveys conducted on investor exchange-rate-expectation. Between 1976 and 1985, American Express Banking Corporation (Amex) polled a sample of 250–300 central bankers, private bankers, corporate treasurers, and economists regarding their expectations at three, six, and twelve-month horizons. And since 1983, Money Market Services, Inc. (MMS) has conducted a similar survey on a weekly or biweekly basis, at a variety of short term horizons. The first two surveys record expectations of five currencies against the dollar (the pound, French franc, mark, Swiss franc and yen), and the MMS data have been collected for four currencies (the pound, mark, Swiss franc and yen). In each survey it is the median response that is reported. Most striking is that the survey-expected depreciation is not only consistently positive, but is larger (often several times larger) than the expected depreciation implied by the contemporaneous forward discounts. This shows that there is more to investor expectations than is revealed by the random-walk model of expectations. When the survey data are used for testing the rational expectations, the general rule seems to be that when the forward discount is biased, the survey data are also biased, with the implication that the finding cannot be attributed to a risk premium. Respondents consistently over-predicted the future value of foreign currencies against the dollar in the period 1980–85. One explanation that could be suggested for such findings of biasedness is that the

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surveys measure investor's expectations with error. But if the measurement error is random, then the conclusions are unaffected.

Another major explanation for the finding of biasedness, short of concluding that investor's expectations are not equal to the rationally expected value, is that the standard errors in our tests are invalidated by the "peso problem" of non-normality in the distribution of the test statistic. The peso problem arises when there is a small probability of a large change in the exchange-rate each period, such as, results from a devaluation, a bursting of a speculative bubble, or a big change in fundamentals—and when the sample size is not large enough to invoke the central limit theorem with confidence.

Frankel and Froot have tested the various expectation formation hypotheses on the survey data. A general framework for expressing them comes from writing the investors expected future (log) spot rate as a weighted average of the current (log) spot rate with weight $1-\beta$, and some other element x_t with weight β.

$$S^e_{t+1} = \beta x_t + (1-\beta)S_t$$

If the null hypothesis will be that expectations are in fact static, that is, that $\beta = 0$ one can choose interesting candidates for the "other element" x_t as alternative hypotheses. The models, in this context, are extrapolative expectations, adaptive expectations, and regressive expectations which may correspondingly refer to the "other element" x_t as: the lagged spot rate S_{t-1}, the lagged expectation, S^e_t, and some notion of a long-run equilibrium level of the spot rate, $\bar{S}_t$, respectively. One characterization of the extrapolative scheme is that the most recent trend is extrapolated. The "bandwagon" expectations of extrapolation are represented by:

$$\Delta S^e_{t+1} = -g\,\Delta S_t$$

where ΔS_t is the most recent observed change in the log of the exchange-rate and 'g' is hypothesized to be less than zero. It may be noted that it has long been a concern of critics of floating exchange rates that the bandwagon expectations would render the system unstable as speculative anticipations are apt to bring about their own realization. But Milton Friedman (1953) argued that mainly speculation would be stabilizing. The property of the bandwagon expectations is that the expected future spot rate as a function of the observed current spot rate has an elasticity that exceeds unity, as contrasted to the static expectations, in which the elasticity is equal to unity. Because investors sell a currency that they expect to depreciate, it follows that under bandwagon expectations, speculation is destabilizing.

On the other hand, in the case of the inelastic, or stabilizing expectations, a change in the current spot rate induces a revision in the expected further level of the spot rate that, though it may be positive, is less than proportionate. An

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observed appreciation of the currency generates an anticipation of a future depreciation of the currency back, at least partway towards previously expected level. In other words, speculation will be stabilizing

$$S^e_{t+1} = (1-g)S_t + gS_{t-1}$$

where 'g' is greater than zero, and the above is a simple case of the distributed lag model and there can be more lags as well.Where $g < 0$ represents the case of bandwagon expectations. Frankel and Froot report that for their empirical tests on the survey data, the point estimate of 0.04 in the three *Economist* data set implies that appreciation of 10 per cent today generates an expectation of 0.4 per cent depreciation over the next three months, a rate of 1.6 per cent per year. They have rejected the bandwagon expectations in favour of the stabilizing distributed lag expectations.

In the adaptive expectations the expected future spot rate is formed adaptively, as a weighted average of the current observed rate and the lagged expected rate.

$$S^e_{t+1} = (1-\gamma)S_t + \gamma S^e_t$$

where γ lies between zero and one.

Frankel and Froot report the results of regressing expected depreciation on the lagged survey prediction error,

$$\Delta S^e_{t+1} = \gamma(S^e_t - S_t)$$

They find the coefficient γ to be positive and significant.

The regressive expectations model was made popular by Rudiger Dornbusch (1976). The substance of the regressive expectation model is that variables such as good prices converge towards their long-run equilibrium values over time in accordance with differential equations, or in discrete time, in accordance with different equations:

$$S^e_{t+1} = (1-\theta)S_t + \theta\bar{S}_t$$

$\bar{S}_t$ is the long-run equilibrium exchange-rate and θ is the speed at which S_t is expected to regress towards $\bar{S}_t$ as can be seen,

$$S^e_{t+1} = -\theta(S_t - \bar{S}_t)$$

The long-run equilibrium $\bar{S}_t$ can itself change, as it is said to be believed to obey the long-run purchasing power parity, increasing proportionately to an increase in domestic money supply and prices.

Frankel and Froot report that investors expect that spot rates regress towards its long-run equilibrium. Regressivity requires not only that investors expect a currency that is above its long-run level to depreciate, but also that they expect to depreciate by more the farther it is above its equilibrium value. The

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Economist regressions at three, six and twelve-month horizons show that deviations from PPP are expected to decay at annual rates of $(1 - 0.9881^4) \approx 5$ per cent, $(1 - 0.9218^2) \approx 15$ and 24 per cent respectively.

While expected depreciation is larger in magnitude, the actual spot exchange-rate process may be close to random walk, sometimes giving rise to unconditional bias in the survey forecast errors during 1980s. Therefore, a spot process that is close to a random walk would suggest that expectations are less elastic than is rational. Even the nature of the rejection of rational expectations strongly depends on the sample period, as for example during the sample period 1980–85. The actual market place may be dominated by the heterogeneous expectations. The weight given to the fundamental factors and to the current exchange rates may change over time by different sets of people operating in the market.

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SOCIAL PLANNING AND RURAL DEVELOPMENT

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'Planning' is a word very much in use for more than a century. The term 'Economic Planning' is so widely and loosely used today that an all-acceptable definition is difficult to provide. Commonly planning of economic activity has been understood to be a 'State Intervention' to correct and regulate the working of the price system. Today, the practice of planning is so widespread that Prof. Arthur Lewis says that he could identify 'six different sense' in which planning could be understood ranging from simple town and country planning to the direction of all economic activity by a central authority.[1] Adopting Ferdinand Zweig we could explain 'Planning' as planning of the whole economy; it 'consists in the extension of the functions of public authorities to organization and utilization of the economic resources. Planning implies and leads to centralization of the national economy. Thus economic planning consists of centralization of the economic decisions of the economic system.'

An important element of 'planning' is setting the 'goal' of a 'plan'. The goals of a plan are the objectives aimed at; they are the expressions of what a society wants. The choice of goals is made through the political system; the ruling authority gives them to the planners who have to see that these goals are articulated sufficiently. It is important that these goals enjoy widespread support of the masses in general if planning has to succeed.

'Goals' are not to be confused with 'aspirations' and 'targets'. 'Aspirations' reflect the ultimate aim of the society such as reduction of inequalities, establishing socialistic pattern of society, etc. It is the most abstract concept. A little less abstract are 'goals', but capable of being reached during a particular plan period, e.g., providing drinking water, basic health care facilities, etc. The least abstract are 'targets'. These are specific, quantitative results that the plan is designed to achieve. The planners have to translate 'aspirations' into 'goals' at first and then express them in the form of 'targets'. It is a process of movement from the general to the specific.[2]

The goals may be divided on the basis of what aspects of society they chiefly refer to. First the goals may be directed primarily at altering the structure of output; secondly, they may be directed primarily at distribution of output; and

[1]Lewis, W.A., *Development Planning*, George Allen and Unwin, London, 1966, Chs. 1 and 2.

[2]Griffin, K.B., and Enos, J.L., *Development Planning*, Addison-Wesley, London, 1970.

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thirdly , they may be directed primarily at altering the relationship between the present and future streams of output and consumption. The above three categories are economic goals, social goals, and temporal goals respectively. Generally, these goals are interdependent.

Of these three goals, the economic has received the greatest attention of economists and governments. The most important economic goal concentrated by less developed countries is to achieve a high rate of per capita economic growth.

The social goals are seldom explicitated because they are generally of a controversial nature. For example, promotion of equality of opportunity in practice would pose problems because this process would erode the privileged group which may also be powerful.

The third category is concerned with time; that is, that are temporal. The society has the option of consuming the whole of its current output or of saving part of it and turning it into investment goods to produce consumption goods at a much faster rate in future. It links the economic and social goals of one instant of time to those at all other instants in time.

After forty years of planning, we have come to realise that we have overemphasised the first economic goal. Good planning should comprise the three goals in proper proportion depending on the nature of the country. Indian planning seemed to have neglected to a large extent the social goal. This neglect has had its repercussions in terms of obstacles and constraints in our planning. In fact, the failure of our plans to a large extent could be attributed to social constraints which have blocked benefits of planned development from permeating to weaker sections of our society, so much so that India in spite of spending over Rs. 400,000 crores over a period of 40 years continues to be poor and over half her population still are below the poverty line.

It is in this context, that social planning is very much needed and desired for India. By "social planning" we mean that planning of the economy should have as its goal development of the societal needs and aspirations; it would mean that each citizen would have a say in planning for the development; his needs and requirements would be taken note of and he would form part and parcel of the whole planning process. Such a planning would be far removed from the impersonal centralised planning of today; it would be a participatory process such that every citizen would feel himself a part and not a stranger and external to the planning process. It would be an endeavour of the whole society and not the responsibility of the rulers and bureaucrats only.

In such a planning, the rural man in India would become the centre of all attention and would be the main actor. Planning would bear fruit. The following pages would investigate how this could and should be organized. It is important to note that nearly three-fourths of our people live in villages. If planning has to be effective, it should touch these people first and foremost. The social planning should primarily focus on the rural man first.

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Review of the Past Planning Experiments

India, after her independence, undertook in all earnestness development of rural masses; but the planners adopted models of development borrowed from the West and the Developed Centrally Planned Economies. Their basic assumption was that benefits of modern sector would trickle down to every nook and corner of the economy, and the developed urban sector would carry forward the rural sector on its shoulders.[3]

The concept of Gandhiji of 'prosperous village communities dotting the land, self-sufficient in many ways and yet interdependent, with decentralised industries and administration'[4] was dismissed as utopian and fanciful. The opposition was feeble and smothered by the powerful urban elite and intelligentsia trained in Western urbanised technology. They alienated themselves from the bulk of the population continuing to live in rural areas who were treated to some jobs by way of welfare measures.

It is a well known fact that the above models not only failed but positively caused fundamental damage in most Asian countries in that these countries instead of relying on their own resources in shaping their own destinies, became permanent dependents on advanced nations. They neglected to develop their own appropriate technology and foster innovativeness. Secondly, the top-down centralised planning system helped only to alienate people, while due to lack of adequate administrative machinery, most of development programmes lagged very much behind schedule.[5]

The top-down planning process lacked very much people's support. The choice for the government was between dependence and greater self-reliance. Many governments preferred soft options of external assistance, with moderate internal savings, and some growth. Such a 'line of least resistance approach' generated a development of very unequal distribution of development benefits. Particularly in rural areas, the Green Revolution while increasing the overall production in agriculture, helped the rich farmers to become richer, and very much helped to sharpen the polarization of the rural society.[6]

Definitely, there is disenchantment with the above models and strategies. Regarding remedies, even today there is no agreement regarding strategies. Disagreement arises on account of fundamental differences in the definition and objectives of development. Three different strategies to planned development have been identified: Technocratic, Reformist, and Radical.

Technocratic approach emphasized technological modernisation, managerial

[3]Wahidul Haque et al., A Quarter Century of (Anti) Rural Development, in *Development Dialogue*, 1977; 2, p. 11.
[4]Ram K. Vepa, *New Technology: A Gandhian Thought*, Gandhi Book House, N. Delhi, 1975, p. 67.
[5]Wahidul Haque et al., op. cit., p. 11.
[6]Chenery, H. et al., *Redistribution with Growth,* Oxford University Press, 1974, p. xiii.

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efficiency and growth of Gross National Product. This approach had held sway over many countries till recently and it is in disrepute now. The choice is between the reformist and the radical. The reformist would believe in the present system and would work out growth models with equitable distribution of income integrated into it. The radical would prefer to redefine the objectives of development in the direction of radical change and redistribution of political power.[7]

The conventional method succeeded only in countries like South Korea, Taiwan, and Singapore, which form just a microscopic proportion of Asian and South Asian countries. For bulk of them, the models based on capital accumulation, frugality, innovativeness, international market, access to home market and also political and military power to create international market were conditions unavailable. Added to these, the problem of fast growing population and the protectionism practised by the rich countries were constraints to progress. Hence these models were unfit for practically all countries of Asia including India. The radical models tried in Eastern Europe, some Asian countries and China did not bring out the hoped for economic emancipation of poor countries of the world.

Collectivism and Development of Man

An alternative method would be human mobilisation in order to convert the surplus labour into means of production. This would involve collectivisation of production relations, choice of appropriate technology and self-reliance. In external economic relations, delinking of global dependent relations would take place leading to economic independence. Attempts were made towards total nationwide human mobilisation to achieve better accumulation of capital. Using collectivist production relations they have used massively surplus labour by means of more labour-intensive techniques. Besides, economic independence freed them from external economic dominance and stopped resource drain under conditions of unequal international exchange. This had the demonstration effect on an increasing number of countries. Thus this method becomes historically a serious alternative in Asia. Thus the capitalist method of accumulation brought in high level of material life, with sizable proportion of population at the bottom remaining in relative deprivation and an increasing number of people becoming alienated from this system. The collectivist method is meant to set aright these defects.[8]

• In the collectivist method 'development is a process by which one's overall personality is enhanced.'[9] Development for a society means that of collective

[7]Wahidul, Haque et al., op. cit., p. 12. Griffin, K., "Rural Development: The Policy Options", in Edwards, E.O. (Ed.), *Employment in Developing Nations*, Columbia Univ. Press, 1974.
[8]Wahidul Haque, op. c it., pp. 13–14.
[9]Ibid., p. 15.

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personality of society. And development of collective personality requires the physical, material and economic development; it is above all the development and application of consciousness and faculties. Development of the society is social development in which economic and non-economic elements interact organically with each other. It is unscientific to separate economic from non-economic elements. Development thus understood is a multivariate quantitative and qualitative change. This may not be cardinally measurable and need not be measurable. It would be futile to attempt social development of a country to measure quantitatively and expect consensus; for the world's richest society may be considered the sickest and thus not developed at all.[10] The cardinal quantification has been made so much fetish as to neglect evaluation of the more essential qualitative attributes for quite long.

It might be considered that the individual and the collective might lead to conflicting interests. This need not be so. This collective spirit may not be abnegation of individual interests in favour of a mystical concept of 'society' as often proposed in communist countries. What is proposed here is that the collective is a method of serving the interests of society, while at the same time raising individual consciousness that one progressively aspires to fulfilment of higher orders including fulfilment in developing together. The individual is expected to contribute his utmost to the collective output, from which he will in turn receive goods and services that would enrich him materially, culturally, and emotionally.[11]

This view of the collective is not an agrarian utopia. It is of a society with material production and economic growth forming an integral part in the process of development of its collective personality. Now looking at the collective as means of individual self-fulfilment is not new. The community spirit is very evident among many tribals even today, e.g., Khasis of Meghalaya and the Nagas of Nagaland and many other tribals of India, and also in some islands of the Pacific. They have collective ownership of property as material base. Further, in some pre-capitalist agricultural societies in Asia and elsewhere, despite breakdown of collective ownership, a sense of community still prevails.[12]

The operational objectives of the above philosophy of development are:

(i) Growth of collective spirit.
(ii) Stimulating the spirit of cooperation.
(iii) Creativity and innovativeness and also the problem solving approach to life.
(iv) Improvement of knowledge.
(v) A will to develop and faith in collective potential of man.

Added to these is the attaining an 'aspirational frontier' which consists of a

[10]Ibid., p. 15.
[11]Ibid., p. 15.
[12]Ibid., p. 16.

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package of minimum nourishment, clothing and shelter, and opportunity for cultural-scientific pursuits. For countries like India, this would be a problem of sustaining the morale. This is obtained by creating values which give a sense of fulfilment.

Self-Reliance

Among the values to be created, self-reliance is the most important one. Rural poor have been too long subservient to the rural rich and 'officers' from the city. Such a subservience helped only to sap their initiative and vitality. Dependence leads to exploitation and losing of self-respect.

Hence Asian countries like India cannot develop unless soft options are rejected and the hard resolve to be self-reliant is implemented. This means the building up of a combination of material and mental reserves, that would enable to choose one's own course of action uninhibited by what others desire. This would require the maximum mobilisation of domestic resources for poor societies. More important is the psychological and institutional staying power to meet crisis situations when supply of essential material is too short. 'Individually a hungry man feels isolated and his mental reserves wane; collectively this reserve is reinforced for each, and collective resolve gives individuals strength to fight a calamity with heads high.'[13]

Self-reliance does not necessarily mean self-sufficiency. The former gives the psychological staying power to the society to open up and negotiate from a position of strength. However, self-sufficiency in strategic areas like staple food production, technology, spare parts and military resistance power is desirable. This makes the development of appropriate technology indispensable. Import substitution in the context of unequal exchange in international trade, restrictive clauses in transfer of technology, and inappropriateness of capital and skill-intensive Western technology is impossible and useless. Technological revolution has to be internally achieved. For 'the masses of people must not be alienated by a transplantation of elitist technology not rooted in their lives. Technological development has to be based on local resources, and people's own initiative and felt needs; it must also be efficiently labour intensive so as to ensure optimum use of available local resources, of which labour is the most abundant.[14]

Participatory Democracy

The 'Collective' envisaged is with and through active participation of the people. It is a democratic function, not just by voting of its leaders into power. It is a government by the people and participatory. This participatory democracy rules out dominance of any minority group over the broad masses of people. It precludes dictatorship of the 'elite' over the masses, of the city over the countryside. There would be no power wielding leadership. If at higher levels

[13]Ibid., p. 17.
[14]Ibid., p. 17.

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there is some form of representation, they would have to remain true to the consciousness and aspirations of their respective constituencies and be truly acccountable to them. Though 'the consciousness gap' between leaders of a society and the masses of people would remain, the leadership and the masses must move in a mutually interacting process that systematically reduces the consciousness gap. Such men are natural leaders of society, whom masses of people tend to follow without coercion. These are needed for our society and they do arise here and there continuously.

In many of the Asian societies, regressive social relations and cultural taboos have paved the way for alienation from man's original and inherent potentials. In many of these countries, it is not the shortage of physical resources which is constraint to development but factors which inhibit the fullest expression of man's natural self; identity with work in which he should find pleasure and fulfilment and with the society in which he discovers his self. Development then means a process of de-alienation, that is, liberation from all inhibitions derived from the structure and superstructure of society that thus dehumanise its broad masses and prevent them from consummating their full potential.[15]

Summing Up

The above development philosophy and objectives centre around the following core concepts:

(i) MAN is the end of development and should be judged by what it does to him.

(ii) DE-ALIENATION OF MAN in which he becomes the subject as well as the object.

(iii) Development of collective personality of man being his richest expression.

(iv) Participatory democracy

(v) Self-reliance as the expression of his faith in his own abilities.

Asian countries are 80 per cent and more made up of rural society. In these countries rural development holds the key to overall social development. The strategy of development points towards the countryside as the focal point. It is against this background the above philosophy was discussed. In this context some development experiences could be examined.[16]

Country Experiences

Many experiments with the above principles had been going on all over the world. Even now small group experiments are being conducted in many developing countries of Asia, Africa and South America. Here we would be referring to some important ones conducted in Bangladesh and India.

[15]Ibid., p. 18.
[16]Ibid., p. 19.

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Bangladesh

Shri Jayprakash Narain's concept to Basic Democracy was adopted by Ayub Khan of Pakistan to ensure the control of the countryside and to put the regime's rural agents absolutely on top. One such was the COMILLA EXPERIMENT. With considerable autonomy an attempt was made to build an institutional infrastructure for sustained agricultural development in rural areas. Comilla area moved into Green Revolution, with social stimulation generated and skills developed. People interested socially in the cooperatives and in the Thana training centres. Motivation, however, remained primarily individual gain and not social development. The result was that institutions become forums of competition rather than cooperation The apparent prosperity benefited the powerful. The attitude generated was not conducive to self-help and growth.[17]

After the Liberation War, among many people's movements "People's Health Centre" was one successful experiment. It was started by a young medical specialist and his team who operated into Savar Thana in Dacca district. It was started as a Cooperative Health Programme integrating itself with a rural development programme. At contact points field clinics were started to treat cases of diseases and paramedical training programmes were given to University students. In spite of resistance and constraints, the programme won the confidence of villagers, mostly due to dedication of its leaders, competence of doctors, and their unelitist and unbureaucratic, field-oriented style of operating. An important condition of this experiment was that treatment was not free. Villagers either paid or became members of a family health insurance scheme. This eliminated the traditional 'relief mentality', but fostered self-help attitude. In two years time the scheme covered 3308 families out of 4500 families of two villages.

Mass mobilization was organised by way of mass meetings house-to-house campaign by leaders, para-medicals and also beneficiaries encouraging others to join the scheme. The group entered into family planning area also but cautiously in order not to invite people's unfavourable criticism and to avoid hurting religious sentiments. However, when they entered into economic development field, they failed because the para-professional agricultural development workers recruited for this purpose lacked dedication, bossed about like government officials.[18]

Next was the literacy programme in Raumari of Rangpur district. It was conceived by the youth of the locality. By July 1973 Katchubari-Kristapur in Dinajpur district was declared completely free from 'thumb sign' and it was claimed that every villager above the age of seven years was able to read and write. This was an achievement through total mobilization for two months by the youth of the region, by persuasive and house-to-house campaign.[19]

[17]Abdulla, Abu, *Land Reforms and Agrarian Changes in Bangladesh*, Bangladesh Institute of Development, Dacca, Nov. 1973.
[18]Progress Report, No. 5, People's Health Centre, Nayrhat, Dacca, Apr. 1975.

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A more important one was the Rangpur self-reliant movement started in mid-1973 by a Rangpur District Agricultural Officer (DAO) in an unofficial capacity. It was started as a pilot project in the village of Kumjipukur with relatively egalitarian system where all landowners were peasants. The movement aimed at organising the peasants for all-round development of their lives, emphasizing self-reliance and resisting exploitation arising out of dependence, the explicit aim being to send peasants to represent in the government. The official was one with the people. The whole experiment was a success because of mass mobilization with 'Krishi brigade' to foster it, self-respect in paying back loans, collective decision-making on what to cultivate, 'who' cultivates 'where', people's courts to settle disputes, literacy, family planning and sanitary programmes undertaken, providing economic infrastructure. This success story inspired other villages to do likewise. The idea of self-reliance was taken so seriously that all offers of official and private help were rejected and even under worst famine conditions no outside aid was obtained, but managed within the community.[20]

These experiments confirm the principles enunciated earlier. The community spirit present in rural masses was given the proper leadership and this leadership planning with the people could help develop into a self-reliant community and thus achieve an all round social development of the rural masses. However, sooner or later, it is normal to expect resistance and also vested interests showing their venom.

There were other experiments as in Sri Lanka where strong and consistent 'welfare' orientation among successive governments resulted in admirable distribution of income and better social services than in many other countries of Asia. But this has not proved to be permanent for want of mass mobilization and 'collectiveness' in general. More interesting is the Indian experiment.

Indian Experiment

Gandhiji, the man of the masses, looked at India with all her economic and social ills—untouchability, caste system, illiteracy, mass poverty, crass inequality and exploitation. He saw that human potential needs to be liberated first. For such a society he wanted to channel all energies to the task of all round development with village as the focus of attention. His vision was of a wantless community, a cooperative commonwealth, which would not only be self-reliant but also self-sufficient. But he was sidelined. Indian planners had their own models of rural development. Earlier community development programmes were vigorously executed. They were: comprehensive self-help movement, enhancing education, health, drinking water, roads, agricultural production and

[19]Rahman Md. Anisur, Consultant, Rural Development Policies, ILO, Geneva, Personal Notes and Interviews.

[20]Thakur, Srinivas, *Rural Industralization in India*, Sterling Publishers Ltd., New Delhi, 1985, Ch. 1.

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cottage industries. This experiment was an utter failure mainly because leaders became isolated and people were alienated. Selfless leaders were scarce; the poorest became the most neglected, and the bureaucracy helped the prosperous to become more powerful.[21]

In the sixties Intensive Agricultural Development Programme (IADP) which instead of looking into the problem of agricultural production concentrated on projects which were purely technological and managerial in character. Elitism and social disequilibrium were fostered.[22] Similarly, the movement of Green Revolution was in the same line. The rich farmers became richer and the poor ones became poorer.[23]

The seventies could be termed the period of 'radical talk' and 'radical action'. It was more talk and less action. From the debate whether India needs 'growth' or 'social justice', the conclusion that emerged was that 'growth with social justice' was needed. New set of schemes to assist small and marginal farmers, to develop drought prone and tribal areas were drawn up. Small Farmers' Service Societies, Small Farmers' Development Agency (SFDA), Marginal Farmers and Agricultural Labourers Schemes, Drought Prone Area Programme (DPAP), Tribal Area Development Scheme (TADS) and Hill Area Development Agency (HADA) were initiated. They were all run by bureaucrats and did not work out well. Two main problems were: identifying the beneficiaries, and lack of adequate finances at appropriate times. Mass participation was absent due to their vertically organised and integrated nature.[24]

To set aright the major deficiencies in all the above rural development programmes in mid-seventies, the Integrated Rural Development Programme (IRDP) was initiated, comprising all the above programmes for the purpose of improving the living conditions of rural poor through development utilisation of local resources by bringining about necessary institutional, structural, and attitudinal changes and creating infrastructural facilities for economic as well as social network and programmes.[25] An extension of this scheme was the National Scheme of Training of Rural Youth for Self-Employment (TRYSEM) in order to train at least 2 lakhs rural youth every year in agriculture and allied activities for self-employment.

Year after year money allotment takes place for these programmes. Modifications and changes are introduced regularly. As for results, nothing extraordinary has taken place at the village level. Though no thorough

[21]Ibid., ch. 1.
[22]Ibid., p. 8.
[23]Dr. M. Sebastian, Stanislaus, S.J., New Farm Technology and Income Distribution, Ashish Publishing House, New Delhi, 1984.
[24]Sundaram, K.V., in *Rural Area Development: Perspective and Approach*, R.P. Misra and K.V. Sundaram (Ed.), Sterling Publishers, pp. 12 ff.
[25]Ahmed, Y.L., "Administration of Integrated Rural Development: A Note on Methodology", *International L. Review*, 1975, p. 119.

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evaluation of these programmes is available, some critical observations could be made on the basis of the working of these two programmes:

(i) There had been widespread wastages and failures on account of failure to assess specific beneficiaries and the possibility of other than the poor using the facilities is well known.

(ii) According to Dr. N. Rath against the target of over 15 million targeted people crossing the poverty line, about 18.7 per cent of the beneficiaries have been estimated to have crossed the above poverty line at the end of the Sixth Five Year Plan. There is a fair estimate that over 20 per cent leakage to other than the poor occurred.

(iii) On the motivational side, the poor got surplus land; they learnt that the government gave them loans, and subsidies for purchase of cows, and so on. They opted for one of them. It could not be said that these were preferential choices to improve their lot. They applied for them because they were free, and rushed to get them. Lacking motivation they sold the assets or spent the money on their daily needs. The real need for these people is income and income-generating employment, or land with necessary inputs so that they could earn an income by their labour. Any other assistance would be wasted and spent. Poverty would not be alleviated. Hence, the above programmes helped only the prosperous, and the poor by and large continued to be poor.[26]

(iv) Finally, this massive scientific programme of assistance to uplift the rural masses failed in its objectives. For the main defect was and continues to be that the 'collective' is missing, and the bureaucrats control the execution of the plan. What is worse is that the avaricious and ulteriorly motivated and greedy politicians are at the centre of the whole scheme interfering in the execution of the scheme.

Success Stories

The Indian story is not a succession of failures. There were a number of success adventures. One such was the Wheat Revolution in Punjab. It is also the best illustration of Green Revolution in India. The entire machinery of the state from law and order to road building was geared to this single purpose and no excuses of lapse was tolerated. It steered scarce resources, i.e., fertilisers, to the highest bidder, who was forced to make the most efficient use of them. Wheat yield increased by 80 per cent, production by 200 per cent, and market arrivals by 300 per cent. The state agricultural income and per capita income trebled at current prices and soared 70 per cent above the national average. It was superimposed on a society based on inequality. It gave an impetus to the expansion of large farmers, driving the smaller farmers into landless labourers. It has finally led to social tension in the state.

[26]Rath, Nilakanth, " 'Garibi Hatao': Can IRDP do it?" in Mahajan, V.S. (Ed.), *Studies in Indian Planning*, Deep and Deep Publishers, N. Delhi, pp. 249ff.

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Milk Cooperative in Gujarat

It is an exceptional example of small and medium farmers, and even those with no lands, benefiting in the process of development. It is the Anand Milk Union Ltd. (AMUL). It was born as a protest against exploiting by private traders. Based on Gandhian values, an inspired group of social workers organised the poor against an exploitative system. It is a cooperative venture started initially to help marketing milk collected from the poor at fair prices, and later on extending other services to the people like artificial insemination service, veterinary service, supply of high quality concentrates of fodder, etc. At the beginning, there were just a few hundred litres of milk collected in the latter of the forties; it has grown to collecting over 6 lakhs litres of milk per day from about 2.5 lakhs members spread over 840 village societies.[27]

The Santhal Movement

Another community movement was the "Santhal Movement", started as a confronting and fighting organisation demanding separate tribal state. They in course of time undertook all round development of the people. The main thrust was food self-sufficiency. They spurn outside help; but have organised the people to self-reliance.[28]

Evaluation

Experiments cited above, both international and national, show that success is not the story of schemes undertaken at national level and on a national scale. Success stories are found in smaller groups and regions. Wherever the state was involved with all its official machinery behind it, success had been limited. From these, it could be concluded that as long as the substance of state power in the countryside remains rooted in vested interests, there is no possibility that efforts of success stories would develop into major national thrusts. If they have to, there should be appropriate leadership which could guide the masses into effective political power. Development which seeks to serve the masses through bureaucracies and rural vested interests, the very agents from whom the rural masses need to be liberated, would never succeed. Stuck deep in mud these people need massive redirection and thrust to lift up the wheels and set them moving again. For this the initiative must be taken by the masses. This would mean the realization of full democracy, which gives the substance of political power to the rural masses in shaping their lives.

Blueprint for Action

Against the above conclusion, we could add that salvation lies in the 'collective' action and 'mass' base. The 'mass' refers to those who do not have

[27]Wahidul Haque, op. cit., pp. 24ff.
[28]Material Base of Santhal Movement, *Econ. and Political Weekly*, Vol. X, No. 11, 1975, pp. 464ff.

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any power in society derived from property, wealth, and religion, caste, expertise and/or office. These are landless labourers and land-poor and working class in towns who form 75 to 85 per cent of the total population in Asian countries.

These masses cannot generate spontaneous initiative in leadership. Committed leaders of the masses need to be developed and fostered. They should be committed and integrated into the society sharing its life. There should be no room for personal or functional privileges. The leadership should systematically submit ideas and actions for critical examination by the masses in a continuous dialogue with the latter, and fully committed to participatory democracy at the grass-root level.

The process of developing such leadership can be scrutinized for each society in its concrete situation. It cannot be generalised. Once such a genuinely mass-rooted leadership does come to power, a perspective for action is necessary. This perspective should be based on broad principles and be a direction for collective efforts. Basically, the first effort would be social transformation of the society through institution-building and restructuring the society.[29]

Social Transformation

The leadership rooted in the masses has first to discern forces for and against social change in order to evolve its strategy, if and when it assumes formal power. It will not be conflict-free. Change will be resisted. Those who would be hurt would resist. And therefore the process of pushing through resistance would essentially be dialectical. The process of new leadership coming into power could be an asset building force. The longer and more difficult this process the greater will be its contribution: creation of mass consciousness, training of the leaders in mass mobilization, disciplining and hardening the people, testing their commitment, and setting new standards for the leadership and building up cadres with leadership qualities in various degrees.

Many of these positives remain imponderables against the more solid, deep-rooted odds. In the ultimate analysis, the inspirational power of a committed leadership over the masses is the last resort. This would require exemplary personal conduct by leadership, a power to galvanize the masses into collective action, and the ultimate ability to retain their trust and support through possible setbacks.

Resistance to change being the main obstacle there should be a critical minimum effort to gain ground. Greater the resistance the greater must be the very important first thrust. A thrust in the context of social change is a determined move to smash impediments to change and to redirect the orientation of society. Subsequent thrusts after the first will be needed to take

[29]Wahidul Haque, op. cit., Part Three, Rural Development Strategy, pp. 47–48.

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the society on to a still higher level of collective life. To combat forces of resistance regrouping more thrusts will be needed.

Social change is not a discrete sequence of target attaining, but a continuous process where the ends are inseparable from the means and so change though progressive may alienate the masses, if for example bureaucratic method is used. Hence, the method employed for any change must be chosen so as to naturally generate the desired institutions and cultures. To achieve liberation, change should not be ahead of consciousness. Masses should be ready for it. Consciousness requires living experience interacting with reflection and collective deliberation, without which action might not be spontaneous, but prone to rashness.[30]

An important task of liberation is to destroy dominance/dependence relation in society. This should be done by collective action. It has to be broken both structurally and psychologically by enthusing the spirit of self-reliance among the traditionally dominated. Another task is liberation from the narrowness of individualistic thinking of community prevailing in these societies which could serve as the base for the rural collective. Individualism is deep-rooted. And so raising of collective consciousness should first be through less formal activities before institutionalising the collective. Thus the process of raising consciousness starts with the thrust towards breaking dominance/dependence relations by collective action.

Land Reforms

Collective mobilisation and action should start with land reforms. Land being the primary source of income and wealth in rural India, inequality in distribution of land is the primary source of inequality in income, wealth and hence power. And so there cannot be genuine democracy in a framework of polarised land-ownership. There is dependence/dominance relationship exploitation. And so, rural development cannot be said to have begun without land reform. Government generally represents landed interests. Therefore a test of the mass-based leadership consists in as and how it launches a genuine land reform programme as its first major thrust. It will offer a powerful instrument for release of mass action and not imposed from above. The masses must be asked to come together, deliberate and decide how they want to redistribute land. This would be an intense experience in collective life of rural masses. The mass will feel the real power they possess. Thus the real foundation for building the collective spirit is laid. This cannot be done by preaching, but learnt through experience in real life. After this, subsequent thrusts to break other dominance/dependence relations would become easier.[31]

The next step is collective ownership of land. Individual ownership would foster inequality; for sustained mass power and also for exploiting economies of

[30]Ibid., pp. 48 ff.
[31]Ibid., pp. 48 ff.

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scale, collective ownership is necessary. That means steps should be taken early towards subjective preparation for collectivisation, through cooperative and collective work of various types, mass meetings, and mass decisions. The fundamental value to be created is self-reliance.

Finally, a society cannot be liberated unless its women are liberated. Women cannot be liberated unless they become self-reliant economically and emotionally. Involving them in the collective decision-making should be the first step. Another important group is the 'elite' in each society. They have their expertise. Their services are also required for building up of the society. Roping in their services would need the change in their attitudes and their identification with the masses. They should get involved in the general mass decision-making process and abide by those decisions. To develop these, education should not be by the present system which is alienating in its process. The education of today is functionally irrelevant and socially parasitic. This needs to be changed and it should be rooted in the life of the masses and related to the mass life.

In this way looking at social transformation, we note that it is not a one-time effort; it is a never-ending process, which means that institutions too are not to be immutable. 'Collective' is not a substitute for institutions. The latter perform the same functions for the collective as memory does for the individual. Institutions are instruments through which collective actions are executed. Mass meetings are discontinuous. The collective is not represented between meetings. Institutions provide the link in time. There is the danger of the institutions suffering from inertia, tending to preserve the past heritage and patterns. Care should be taken to minimise these dangers. They should be allowed to evolve naturally out of a collective need and urge to work together. Therefore, this institution as expression of collective personality evolves out of collective action, experience and decision. It is specific to each collective and cannot be transferred to another locale. The best that leadership can do is to introduce new thought for change and encourage an intensive exchange of experience between various collectives in the process of institutionalization leaving the decisions to the people.[32]

Conclusion

To sum up, the working of mass democracy is the basic tenet of the approach to rural development. Institutions are a major vehicle to give operational content to democracy, for democracy cannot be practised in the abstract but must be related to the concrete day-to-day tasks which are performed collectively. Planning, implementation and evaluation of these specific actions are the functions of mass democracy. At the primary unit level, frequent mass meetings are the formal forums of democracy, and the unit should be compact and cohesive enough to permit these meetings. All functionaries would be accountable to this general assembly for actions taken in the interval,

[32]Ibid., pp. 56 ff.

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which would be to review, criticise and modify. At higher levels, meetings would be attended by elected representatives, who would be rotated, and should be open to people in order to prevent an air of secrecy.

Demystification of tasks and functions, accountability to the masses and promotion of a non-elitist leadership ethics are prerequisites of a functioning of mass democracy which an institution should be designed for. Added to the above, the institution should lay stress on self-reliance throughout the process of evolution. The masses must be constantly enlarged to recognize their own creative and fighting powers and to solve their own problems instead of looking for soft options.

Given the nature of Asian countries, the above is an alternate approach to development and planning based on community and mass mobilisation and collective action with the commitment of the members of the society to plan development action, which would be need-based and well suited to that particular society. It is not communism, but Gandhian development brought up to date. To the question whether it is workable, practical, and achievable, the reply is that such a system has worked in limited areas and regions and the community spirit is still extant among the 85 per cent of the rural people in India. For the matter whenever a new organisation of human society took place in the past, similar questions and doubts were raised. And today we are leaving them.

Finally, people are impatient with mass poverty; they are anxious to enjoy the good things of life. Hence we should admit that the basis is there. It needs to be cultured and nurtured. What is really needed is rethinking on the whole question of development and planning. There should be fundamental shift from urban biased development approach to rural biased development and planning, taking into account the needs of rural people, their requirements and also getting their full participation in decision-making.

Is this an utopia? or a pipe dream?

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BOOK REVIEWS

NEW WORLD ORDER SERIES, Vol. 7: NORTH-SOUTH TRADE IN MANUFACTURES

Edited by H.W. SINGER, Institute of Development Studies at the University of Sussex, Brighton (England); NEELAMBAR HATTI, Department of Economic History, Lund University, Lund (Sweden); RAMESWAR TANDON, Institute for Social and Economic Change, Bangalore, (India).

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Reviewed by Dr. U.N. LAKSHMAN (Former Post-Doctoral Research Fellow, ICSSR, New Delhi), Reader in Banking, University of Mysore, Manasagangotri, Mysore-570 006 (India).

This is yet another useful volume No. 7 from New World Order Series entitled 'North-South Trade in Manufactures', edited by three famous authors defining the problem of terms of trade, and explaining the need to expand exports in the 1990s. The volume is a product of contributions from economists from different countries of the world and from specialised world institutions in the field of trade and its related topics. In a nutshell this volume explains changing patterns of comparative advantage, market structure and export performance, North-South terms of trade, structural change and fallacy of export composition, export opportunities or immiserization, institutional obstacles to South-South trade and alternative approaches to measure structural change.

In the introduction it states that expanding exports in the 1990s is crucial for the growth of the LDCs, and this process requires structural changes in the developed countries as well as the LDCs. For the LDCs the challenge is to have flexibility to capture markets in the developed countries. The importance of macro-growth for LDCs prosperity is very important and the LDCs can no longer be considered to be on the periphery of global economic activity.

The volume is divided into 7 parts. Part A entitled "Changing Patterns of Comparative Advantage" consists 3 chapters. Chapter 1 of Part A, namely "Comparative Advantage and Free Trade" by Paul Streeten of Boston University, USA explains that the doctrine of comparative advantage forms the basis for free trade. However, as Rousseau wrote, "Man is born free, and everywhere he is in chains." Similarly, it is said, "Economists recommend free trade and everywhere there is protection." Two questions have been raised in the chapter. The first is: Is it true? Do its premises correspond to the real world? The other question is: If the doctrine is not true, are government interventions in foreign

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trade justified? The author has done a fine analysis with examples by bringing out the sharp differences of opinion on comparative advantage between Allyn Young and Adam Smith. The free trade gospel, based on the doctrine of comparative advantage, bids us always to strive for higher incomes from the international division of labour. But adjustments in response to changing comparative advantage are costly. Much of trade theory and the theory of policy takes the interest of the nation-state as its starting point. The chapter concludes by saying that in spite of its great intellectual attractions, the doctrine of comparative advantage cannot provide the basis for either predicting the flow of trade, or recommending free trade.

Part A, Chapter 2, entitled "Consistency Tests of Alternative Measures of Comparative Advantage" by Robert H. Ballance, Helmut Forstner and Tracy Murray of Austria and USA respectively, expresses the difficulty in quantifying the international differences in comparative advantage. The chapter examines the various measures of comparative advantage and also tells the difficulty in using the real world data to measure comparative advantage. The difficulties that researchers have addressed include:

- relating the magnitude of production, exports, consumption and imports to country size and product significance;
- dealing with aggregation in the data
- concording trade data with data on domestic production and consumption, and
- dealing with government policies that distort trade such that actual trade flows do not reflect the underlying pattern of comparative advantage.

The chapter concludes that it is impossible to identify empirically a 'valid' measure of comparative advantage. The author points out that empirical work incorporating measures of comparative advantage should rigorously base the specification of such measures on theoretical constructs rather than adopting heuristic measures that have appeared in the literature. In particular, statistical criteria should not be the basis for choosing among alternative seemingly reasonable RCA* indices.

Part A, Chapter 3, entitled "The changing comparative advantage of Japan and the United States by Bela Balassa and Marens Noland of Johns Hopkins University, USA and Institute of International Economics, USA, examines the changing comparative advantage of Japan and the United States in manufactured goods. The chapter analyses that the two countries specialised in different industries within high tech due to strategic trade considerations and differences in the kinds of R & D activities pushed in different industries. The authors come to the conclusion that a future pattern of specialisation would be that the United States specializes in natural resource based products and high technology products, while Japan specializes in a broader range of manufactures. This

*RCA—Revealed Comparative Advantage.

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implies that in the long run the development of the newly industrialized countries of East Asia will pose greater problems of structural adjustment for Japan than for the United States. Areas of future Japanese specialization may be drugs, where the rise of biotechnologies may be shifting R & D activities in this industry from a science based to a high tech pattern and computer peripheral devices and software.

Part B entitled "Market Structure and Export Performance" consists 4 chapters namely 4, 5, 6 and 7. Chapter 4 entitled "Developing countries' Exports of Manufactures: Past and Future Implications of Shifting Patterns of Comparative Advantage" by Alexander J. Yeats of World Bank, explains the implementation of structural adjustment programmes, efforts to liberalize international trade barriers, or the development of an "early warning" system for disruptive imports, information on changing comparative advantage and the future composition of international trade. The chapter makes a critical evaluation of the predictive power comparative advantage indices for future changes in trade by drawing on the NBER* study. The evidences developed suggest that factor proportions information is useful for longer term trade projects. The chapter points out that lack of access to technology, capital markets, marketing and the distribution systems or oligopolic practices of established firms are the major additional reasons to show why trade patterns do not follow lines of comparative advantage. The key point that emerges from this chapter is that labour-intensity was a useful predictor of developing country exports, although there was variation in national supply of, and demand for, these goods. The authors suggested five important areas where further research can be taken (pp. 112 and 113).

Part B, Chapter 5 entitled "Market Structure and LDCs' Manufactured Export Performance" by C.D. Jebuni, J. Love and D.J.C. Fossyth of Bostwana and England emphasised the influence of market structure on less developed countries' performance in exporting manufactured products. The chapter, besides pointing out the most common measure of export performance is the revealed comparative advantage devised by Balassa, says that where market structure is negatively related to export performance it would be appropriate to create domestic monopolies. Rather policy should be aimed at creating greater domestic competition.

Part B, Chapter 6 entitled "Trade in Manufactures, Newly Industrializing Economies (NIEs) and Regional Development in the World Economy: A European View" by Detlef Lorenz of Germany points out the tendencies to regionalize the world economy by quoting European Single Market 1992 and the "Fortress" symptom, and about the U.S.-Canada Free Trade Agreement. This paper deals with the integration of NIEs into the world economy via trade in manufactures with the geographically trilateral core-countries/regions, e.g., the United States and Japan. The chapter further explains the developments and

*NBER—United States National Bureau of Economic Research.

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issues regarding the trilateralists: hinterland relations between EC and the ENIEs, A-NIEs, LA-NIEs, and E-NIEs. The chapter concludes that the various tendencies to regionalise do not show an inward looking strategy of trade bloc building, but they reveal an "open-minded" regionalism aiming at strengthening world trade, although perhaps operating the trade system in a somewhat different manner.

Part B, Chapter 7 entitled "A Structural Model for Developing Countries' Manufactured Exports" by Cristian Moran of Chile explains that manufactured exports have continued to gain importance in world trade propelled by the higher income elasticity of demand for manufactures than for primary products, and by the changes in the economic structure associated with increases in per capita income. This chapter expands the literature by using a simple model to assess the likely impact of a change in external economic activity on export revenues for developing economies—a key concern for the highly indebted countries and a topic which has been the subject of recent debate in the international trade literature. In this chapter mathematical equations have been used to determine the structural model of export behaviour, export demand and dynamic adjustment. To increase export revenues, domestic economic policies will need to play a key role in their strategy to increase foreign exchange earnings.

Part C entitled "North-South Terms of Trade: Recent Evidence" consists 3 chapters namely 8, 9 and 10. Chapter 8 entitled "Manufactured Exports and Terms of Trade Movements for Less Developed Countries in Recent Years (1980–87)" by P. Sarkar and H.W. Singer of India and England respectively examine the validity of Prebisch-Singer hypothesis and analyses the behaviour of the prices of manufactured exports of the LDCs in relation to those of the industrially developed countries over the period 1965–85. The chapter also examines whether changes in real exchange rates of some LDCs exerted any influence on their volume of total as well as manufactured exports and on relative unit values. The chapter concludes that manufactured exports did not provide the LDCs any major escape from the long term deterioration in their terms of trade vis-a-vis the DCs. Sarkar (1989) found no evidence that an LDC with a higher burden of debt devalued more in real terms and gained more in terms of a higher rate of expansion in export volumes. The chapter has given extensive data for further research through tables and graphs of different countries.

Chapter 9 of Part C entitled "The Long-run Determinants of North-South Terms of Trade and Some Recent Empirical Evidence" by David Evans of England points out that the bias in terms of trade against primary commodity producers weakens the role of trade as an "engine" of growth. The idea that trade is the "engine of growth" is misleading and it is difficult to find empirical support for the idea that the growth experience of developing countries has been export-led. The author concludes that it will be appropriate to think of trade as the "hand maiden" of growth, a term coined by Kravis (1970). The author also

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points out that it is the change in the pattern of biased technical change which provides a powerful part of the explanation of the observed adverse movements in the price of primary commodities against manufactures.

Chapter 10, Part C, entitled "A Demand Function for Internationally Traded Primary Commodities" by David Sapsford of England specifies and estimates a demand function for primary commodities. For simplification, the author assumed the existence of a single homogenous primary commodity and a single primary commodity substitute, each of which is usable for either consumption purposes or an input into the productive process. The chapter utilised mathematical formulae to explain the factors. The chapter has given exhaustive data which can be used by any good researcher.

Part D entitled "Structural Change and Fallacy of Export Composition" has three chapters namely 11, 12 and 13. Chapter 11 entitled "Structural Change: Accommodating Imports from Developing Countries" by Gary, P. Sampson of Switzerland reviews the current state of thinking on matters that are relevant for structural change: Accommodating Imports from Developing Countries. The chapter emphasises the thrust on expanding exports for the development of developing countries. The author points out, "If structural adjustment policy is to be seen to be impartially administered, and to be primarily concerned with serving the general well being of the community rather than particular interests, it is necessary for its operation to subject to the maximum possible extent practicable to public scrutiny and public accountability." Further the author has discussed in detail about how jobs will be created in developed countries if economic growth takes place in developing countries.

With regard to protection the author points out that maximum benefits from trade liberalization are not assured as undue attention is paid to the demands of "political actors". Michael Finger observed: "Just as dogs have legs to scratch their fleas, governments have institutional arrangements to deal with claims for protection." The "escape clauses" provisions in GATT and in national legislations (i.e., the right to escape from promises made) take no account of whether the process of economic change which is being arrested improves the resource distribution and competitiveness of the national industry. National institutional structures that promote public awareness of the economic costs and benefits of government action provide the most effective means to discipline governments.

Chapter 12 of Part D entitled "Penetrating the Fallacy of Export Composition or Hobson's 'Second Flasehood' Revisited" by O. Havrylyshyn of USA expresses the pessimistic reaction that developed right from the days of Matthews stating that one industry or new technology destroys the other. The present paper addresses a factor known as "fallacy of export composition" pessimism stating that if all were to export at the rate of few success cases, the volume of exports could not be absorbed by developed country markets. Exports of developing countries will grow slowly when the world economy slows.

Chapter 13 of Part D entitled "Inter-Industry and Intra-Industry Specializa-

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tion in Manufacturing Goods" by Bela Balassa and Leu Bauwens of USA and World Bank respectively examined the determinants of international trade in manufactured goods in 152 industries among 38 major exporters of manufactured goods. This paper considered the impact on bilateral trade in individual industries of the factors affecting inter-industry and intra-industry specialization, together with that of gravitational factors. The authors say that trade between any two countries is positively correlated with their average per capita income and country size and negatively correlated with inter-country differences. Section IV lists the gravitational variables utilised and among them distance is a barrier to trade whereas the existence of common borders has the opposite effect. Participation in integration schemes as well as common language and culture tend to promote trade among the countries concerned. The paper has successfully tested hypothesis pertaining to intra-industry and inter-industry trade, as well as the effects of gravitational factors, in the framework of a multi-country and multi-industry model. The results also indicate the compensatory character of inter-industry specialization in determining international trade flows.

Part E entitled "Export Opportunities or Immiserization" consists 4 chapters namely 14, 15, 16 and 17. Chapter 14 entitled "Export Opportunities for the South in the Evolving Pattern of World Trade" by Jean Waelbroeak and Jacob Kol of Netherlands focuses attention on North-South trading relations with the "Big Three" trading nations: the United States, Japan and the European Community, with developing countries. This paper concentrates only of manufacturers and not on agricultural trade. The chapter also reviews the comparative advantage of developing countries in products. The chapter provides a lot of information which is useful to a researcher on the topic in the form of Tables on pp. 450–460.

Chapter 15 of Part E entitled "The North's Demand for Southern Exports and Immiserization of the South" by Abdel Hamid Mahbob and Jeffrey B. Nugent of University of California, USA utilises mathematical formulae to reconstruct an argument substantiating the original claim of Chichilnisky and Heal McLeod that immiserization can occur even when the initial change is an exercise in the North's demand for the South's export. The authors support Bhagwati's "general theory of immiserizing growth".

Chapter 16 of Part E entitled "Transport Cost Differentials and Competitive Advantages of Industrial Countries' Exports to ASEAN Countries: The Example of Philippine Imports" by Rolf J. Languamner of Germany explains the impact of transport costs on the direction of trade flows rather than on the competition between domestic and foreign suppliers. Empirically, it was demonstrated that transport costs exert a crucial impact on bilateral trade flows and a developing country like India has suffered from a sizeable transport cost disadvantage relative to its competitors in the U.S. market. The impact of transport costs on trade flows is determined by demand or cost variables of individual products, such as unit value, shipping distance, storage factors and total traffic volume,

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and varies considerably among countries. The case of Philippines imports does not support the view that transport cost diferentials between exports from industrialized countries significantly influence the direction of trade flows. Japan seems to owe most of its competitiveness of ASEAN markets to production and marketing cost advantages rather than to lower transport costs.

Chapter 17 of Part E entitled "Does Agricultural Growth in Poor Countries Harm Agricultural Exporting Rich Countries?" by Kym Anderson of Australia says that due to rapid agricultural growth in developing countries, rich countries see that such growth will reduce their export earnings. Besides, rich countries also feel that their giving of aid, the agricultural research and management skills, genetic material from livestock studs and the like are the sources of developing countries' comparative advantage. The paper demonstrates that agricultural growth in developing countries does not harm agricultural exports of rich countries' by giving an example of China. The chapter makes a case study of China which illustrates that though agricultural output in China increased by 50% between 1978–84, yet agricultural exports to China have grown enormously over that decade. The author questions as to why the U.S.A. and Australia bother to tie it to agricultural projects requiring national skills. This is done mainly to ensure that skills like agricultural research and management skills, genetic material and the like are purchased from the donor country rather than from other countries. It simply means that the donor country's excess supply of these skills would be partly absorbed by the aid project, thus adding a more-specifically and more-visibly US or Australian image to the project, which may be desirable for political reasons. It needs hardly be said that assistance to developing countries is motivated by more than just economic gains to donor countries by way of trade expansion.

Part F entitled "Institutional obstacles to South-South Trade" comprises 5 chapters namely 18, 19, 20, 21 and 22. Chapter 18 entitled "Policy and Institutional Obstacles to South-South Trade in Manufactures" by M. Newson and D. Wall of England identifies and analyses the impact of various policy and institutional obstacles to the expansion of developing countries' mutual trade in manufactures. This paper besides pointing out exchange control regimes examines the extent to which the commercial policies in force in the South, and their modes of operation, actually generate a specific bias against South-South trade in manufactures. The biggest obstacle to South-South trade creation is under-development, but the lack of various trade facilitating institutions and infrastructure within the South constrain the ability of developing countries to exploit existing trading opportunities within the current structures of protection.

Chapter 10 of Part F entitled "South-South Cooperation: Challenges and Opportunities" by Dragoslav Avrmovic of USA explains the important areas in which developing countries are facing serious economic problems. The author suggests the setting up of CSO (Central Selling Organisation) for their major products to maximise exchange revenue. However, he cautions that South-South trade is not a substitute for the setting up of a central selling organisation and

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they must become complementary. At the same time he makes it clear that there should be no conflict between the expansion of South-South trade and the expansion of developing country exports for convertable currencies which continue to be badly needed.

Chapter 20 Part F entitled "Impact of Growth and of Agricultural Price Policies on Patterns of World Trade: A General Equilibrium Approach" by Jean Marc Burniaux of France focuses on the trade of agricultural goods and its potential regional patterns, including the South-South axis. The developing world does not have a homogeneous agricultural price policy. This contributes to the fast development of South-South trade of agricultural products. The chapter gives exhaustive tables which are useful for further research on the topic.

Chapter 21 of Part F entitled "On Agricultural Subsidies and the GATT Negotiations" by Louis Emmerij of France says that the United States subsidises irrigation and land clearing projects and then pays farmers not to use the land for growing crops. The industrialised countries are having a vicious circle. High subsidies stimulate production leading to overproduction which in turn leads to expensive stockpiling. In order to get rid of their stocks, they compete for markets and are willing to dump their surpluses at artificially low prices on the world market, thereby reducing world prices and diminishing the chances of agriculture in many developing countries. Though GATT is responsible to regulate tariff and non-tariff barriers, yet due to various waivers and protocols demanded by US, Switzerland and Japan, agriculture was taken out of GATT. Uruguay Round attempted to bring agriculture under GATT but did not succeed. The reduction of support to livestock production in the OECD countries could be more important to developing countries than liberalization of foodgrains.

Chapter 22 of Part F entitled "In Search of a Subsidy Rule for India's Exports" by T. Datta Chaudhuri and Arpita Dhar of India pointed out that numerous restrictions have breeded inefficiencies in the domestic economy raising the prices of non-traded inputs. They have also raised the unit cost of production making Indian exports non-competitive in the world market. The authors explain that just increasing or decreasing subsidies along with the balance of payments position may be a reasonable policy as far as the short-term crisis management is concerned, but for long-term results, the factors mentioned in this study need to be considered.

Part G entitled "Alternative Approaches to Measure Structural Change" comprises 3 chapters namely 23, 24 and 25. Chapter 23 entitled "Newly Industrialising Countries in the World Economy: NICs, SICs, NECs, EPZs, or TEs?" by Detlef Lorenz of Germany examines the role and importance of groups in world economy. The chapter suggests three important fields for further research (pp. 644 and 645).

Chapter 24 entitled "Taylor on North-South Trade Patterns and Growth: A Reformulation and Interpretation" by C. Rene Dominique of Canada explains through mathematical formulae about the steps to the taken by the South, but recognizing that such steps must also bear in mind that North may react sharply.

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Chapter 25 entitled "North-South Trade and Basic Needs" by Graciela Chichilnisky of USA says that in spite of the increasing degree of internationalization of economics, the concept of basic needs is still a part of domestic issue. The paper examines the missing link between international policies and basic need policies by discussing alternative trade theories. The appendix provides computer simulations of a model of North-South trade, and examines in practical terms the impact of exports on domestic consumption, investment, employment and wages. The paper also outlines a North-South model which has been tested econometrically in the context of UNITAR Project. This is also presented in the Appendix. The author comes to the conclusion that the development of South cannot be based on the relative advantage of cheap labour provided by extreme mass poverty. Better terms of trade with the North are linked with better distribution of income within the South. Basic needs are not only a domestic issue; they pertain to the international community as a whole.

The editors have done an excellent job by collecting various papers on the subject from different experts throughout the world. The editors took due precaution to publish all the details in the chapters. Each chapter has been well documented. The research students on the subject and on inter-related topics will get maximum benefit to prepare their doctoral theses by giving a reading to the book. The subscribers have enough evidence to prove its social, political and economic relevance but not enough information to contribute more authentically due to political ideologies of different countries. Therefore, a reading of the book leaves one with the feeling that scholars are still struggling to establish a set of definite rules for North-South in Trade Manufactures. The suggestions in the book are well supported by consistent data base. They have certainly advanced the knowledge on the topic by analysing the structure and practice of trade in different countries dealt in the book. Social scientists will be immensely benefited by reading the book. The policy-makers too will get a number of insights. In total, it is certainly an excellent volume which deals with the development of North-South Trade

NEW WORLD ORDER SERIES, Vol. 9: AID AND EXTERNAL FINANCING IN THE 1990s

Edited by H.W. SINGER, Institute of Development Studies at the University of Sussex, Brighton, (England); NEELAMBAR HATTI, Department of Economic History, Lund University, Lund, (Sweden); RAMESHWAR TANDON, Institute for Social and Economic Change, Bangalore, (India).

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Reviewed by Dr. U.N. LAKSHMAN, (Former Post-Doctoral Research Fellow, ICSSR, New Delhi), Reader in Banking and International Finance, University of Mysore, Manasagangotri, Mysore-570 006 (India).

This is yet another very informative volume No. 9 from New World Order Series entitled "Aid and External Financing in the 1990s, edited by three learned professors. This is probably a provocative and timely book which explains the events in the field of aid and external financing in 1990s. Of course this volume is a product of contributions made by eminent persons hailing from different countries of the globe. In a nutshell this book deals with five broad themes, namely (a) the international context in which development aid was given in 1980s; (b) Donors' interest in giving aid including food aid; (c) Issues involved in aid; (d) The problem of debt; and (e) World economy forecasts the international agencies.

The introduction points the declining trend of aid to developing countries and emphasised the need of aid to minimise the debt problem to avoid the debt trap. Further it suggests to reduce international rates of interest to have a solution for debt problem.

The volume is divided into 8 parts. Part A entitled "Fungibility and Allocation of Aid" consists of 4 chapters, Part B entitled "Food Aid and Disincentive Debate" consists of 3 chapters, Part C entitled "Aid, Dutch Disease and Two Gap Models" consists of 3 chapters, Part D entitled "Sector Lending and Other Radical Proposals" consists of 3 chapters, Part E entitled "Negative Financing and Options for Latin America" consists of 4 chapters, Part F entitled "External Financing: Some Case Studies" consists of 5 chapters, Part G entitled "Global Imbalances and Recent Initiatives" consists of 3 chapters, and Part H entitled "Emerging Issues for Institutional Coordination" comprises of 5 chapters.

Chapter I of Part A namely "Aid in the Development Process" by Anne O. Krueger, USA, explains how Marshall plan transformed the economies though two great intellectuals differed in their approach. The chapter concentrates on the role of aid in development and growth. The author does not fall behind in mentioning the motives behind aid like military, commercial and political. By the end of the 1950s, the recognition of human capital and foreign exchange helped the development economists toward a general equilibrium view of development and away from unicasual theories. In the meanwhile aid has been termed as "transfer of resources". Though "two gap" model was developed by Bruno and Chenery, it was elaborated by Chenery and Strout, still they had constraints on growth. However, all observers agree that countries with low per capita incomes have little physical and human capital per head, and that increasing capital is essential to growth. Debt crisis in 1980s developed two questions namely whether private flows will remain to develop profitable opportunities in developing countries, and whether developing countries will be in a position to use the private international capital market centres on the 'debt

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overhang'. Aid should not be justified on profit basis because in most of the developing countries projects on which they are spent will not yield immediately and need a gestation period. Hence aid should be based on "need" or humanitarian motives. On criticism of aid the author says that either aid perpetuates dependency or it permits governments to escape the burdens of their foolish economic policies. However, as most aid goes to governments, it increases the role of government. The fact that resources are given to governments does not mean that they have command over them. Proper allocation of scarce governmental as well as of private resources is an important condition for satisfactory growth.

Chapter 2 of Part A entitled "The Allocation of Aid among Developing Countries: A Multi-Donor Analysis Using a Per Capita Aid Index" by Mark McGillivray of Australia tries to measure recipient distribution of their aid and multilateral agencies. Donor performance is measured by an 'ncome weighted per capita index formulated in this paper. The results of the performance of four countries namely Belgium, Finland, Denmark and Norway show they are superior to that the other donors (Table 2, P. 73) and the United States of America was shown to be the poorest performer. The index was utilised only to show that the country's need for aid is population size. This is simply because a heavily populated developing country requires, *ceteris paribus*, more aid than a less populated one.

Chapter 3 of Part A entitled "Development Assistance: Trade versus Aid and the Relative Performance of Industrial Countries" by Alexander J. Yeats of World Bank, USA develops a methodology to assess the contribution of aid and trade of industrial countries. The results here show that countries like Sweden, Norway, and Denmark which are generally regarded as having liberal aid policies perform below average when combined effects of aid and trade are considered, while the UK, Netherlands and Belgium emerge as making maximum contribution to development. The United Nations General Assembly adopted a target under which each developed country's aid contribution would be at least seven- tenths or 1 per cent of the donor's gross national product. This goal has been achieved only by Denmark, Netherlands, Norway and Sweden. McKinon as well as Chenery and Strout formulated growth models which show that an extra dollar of exports has the same effect on development as an extra dollar of foreign aid. The chapter gives the statistical figures in pp. 84 and 85 (Chart 1) to show why only four nations achieved the target set by the United Nations. It is clear from the chart that differential trade performance of the top five donor countries generally accounts for 70% of the joint trade and aid contribution. This study suggests that the current practice of establishing aid targets be modified to account for the donor's differential trade performance.

Chapter 4 of Part A entitled "Foreign Aid and Domestic Savings in Less Developed Countries: Some Tests for Causality" by Paul Bowels of Canada underlines the negative correlation between foreign aid and domestic saving rates in the LDCs is an accepted fact but the direction of causality remains a

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subject of dispute. In this study time series data is used to investigate causal relationships and the conclusion follows that causal relationships are not universal. This study is largely concentrated on the studies made by Griffin (1970) and Griffin and Enos (1970) which argue that aid is not distributed on the basis of economic need but on the political expedinecy. Aid is given based on the benefit it yields in terms of political support. Thus aid is determined by the donor country motives. Griffin's points have been given in pages 92–93. The paper concludes by expressing doubt on the reliability of existing theories which suggest that the macro-economic effects of foreign aid are the same for all countries. The results of this study suggest that there are important links between the motives of foreign aid and the economic effects of aid.

Chapter 5 of Part B entitled "Food Aid: Development tool or Development obstacle?" by H.W. Singer of England says that food aid is only 10 per cent of the total aid by value. Singer suggests that food aid, given as balance of payments support really represents financial aid but food aid helps with local development cost in a way that financial aid does not. For poor countries food aid is essential not only as aid but also as foreign exchange. Though food aid is largely on humanitarian basis, yet there is the conflict between food aid and financial aid. Food aid should be valued at a low shadow price or perhaps even at a negative price since the donor countries save themselves the cost of storage. For purposes of economic analysis food aid is in fact financial aid with the intention of providing balance of payment support. The only reason why a big chunk of food aid is really financial aid is because food aid started as 'surplus disposal' and 'trade development', i.e., PL 480.

However, the author makes it clear that there is no such thing as financial aid: all financial aid has to be converted into commodities serving as inputs into the development process—machinery, raw materials, spare parts and also food, except perhaps where the aid serves to build up financial revenues or bank accounts in Switzerland. The author poses a question saying whether food aid is better than financial aid or which is superior and which is inferior? Food aid is certainly a result of Common Agricultural Policy (CAP) of EEC. Neither economic history nor current cross-country analysis supports the view that food aid reduces the growth of local food production. It was food aid which helped India, Korea, Israel and Greece to finance the Green Revolution. In fact it was the same with Marshall Aid. Few people now remember that 40 per cent of Marshall Aid was commodity aid, the bulk of it was food aid. Food is a fact of life, and our task is to make it more useful for development and the reduction of poverty.

Part B, Chapter 6 entitled "Food Aid: An Assessment" by Christopher Stevens of England says that food aid also suffers from all problems associated with other forms of aid. In this chapter some questions like: Does food aid do more harm than good? Are we dumping surplus agricultural production and putting farmers in developing countries out of business? were asked. The essential point is to ensure that food aid fits into a policy framework in the

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receiving country which will be productive in nature. The author comes to the conclusion by pointing out the need to keep food aid under continuing scrutiny and at the same time putting pressure on national governments to achieve the desirable effects of food aid.

Part B, Chapter 7 entitled "Development Assistance in the 1980s: Some Propositions Relating to a New Aid Approach and Operational Issues" by John P. Lewis of USA, wonders whether aid performance has not yet stagnated but a growing squeeze on multilateral prospects. The author draws the following lessons in the chapter: (a) The multilateral development bank business should be active and constructive. (b) They should press effectively for the policy matters to the achievement of the recipient's development objectives. (c) Development aid will remain bilateral during the present decade.

During the next several years, more effective coordination among both donors and recipients is necessary. In view of the uncomfortable mismatch between national public sectors and the international public sectors, it is a mistake to view aid programme as an international programme that competes with domestic welfare activities. After all, aid is so small in relation to defence budgets of many donors!

Part C, Chapter 8 entitled "International Borrowing in the Presence of a Resource Boom: The Dutch Disease and Debt in Four Oil-producing Developing Economies" by James H. Cassing and Jerome C. Wells of USA underlines that the economies of resource booms are a part of growth. Now the claims of 'hysteresis' have some empirical validity. Recent contributions to international trade and development have focussed upon the domestic consequences of unanticipated sector-specific growth, especially in a natural resource export industry, the so called 'Dutch Disease'. The resource-booming economies of the 1970s, when confronted with the resource burst in the 1980s did not uniformly return to their pre-boom structure. The analysis here focuses on the experience of four oil-producing LDCs—Indonesia, Mexico, Nigeria and Venezuela. Section 2 of the chapter discusses the economic adjustment in developing 'credit constrained countries'. Section 3 presents a means of relating traditional national product measures to the movement of welfare over resource cycles and shows how the acquisition of further resources (and debt) can act to stabilize or destabilize movements in welfare over a cycle. This section besides giving some dimension to economic adjustment occurring through the four channels mentioned in the chapter, presents a national accounts based measure of the linkages among production, the terms of trade, foreign net borrowing and standard measure of national welfare, i.e., consumption potentially available. This section uses mathematical formulae to observe the changes. Section 4 examines the joint impacts of debt and the 'Dutch Disease' of Indonesia, Mexico, Nigeria and Venezuela where oil is a significant but not overwhelming component of national product. It examines the basic economic conditions in the four countries before the boom and attempts to determine how each was affected by and reacted to the boom and external opportunities for borrowing that it

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presented. Two tables, pp. 159 and 161, and three graphs, pp. 162, 163 and 164, are self-explanatory. Section 5 traces the movement of national product aggregates and their sectoral components over the resource cycle. Section 6 deals with the variations in product use over the petroleum cycle. Table 8, p. 174 and Table 9, p. 175 explains the economic aspects of the oil boom by examining the changes in product use associated with the 1973–81 expansion phase and the 1981–86 contraction. Section 7 describes the interactions between debt and trade balances and draws together results to provide some tentative propositions about the impact of foreign borrowing during resource booms. It also explains the interaction between resource booms and international credit-worthines and the effects of this interaction on the growth paths of output and welfare in four oil producing countries over the 1973–86 petroleum cycle.

Chapter 9 of Part C entitled "Aid the Public Sector and the Market in Less Developed Countries" by Paul Mosley, John Hudson and Sara Horrell of UK starts with a question: Does overseas aid do any good? and answers that it is not possible to give any trustworthy answer to the question. On the one hand theoretical literature says that aid may 'immiserise' the recipient. On the other, the empirical literature suggests that the theoretical possibility has not yet materialised. However, both the literatures do not offer any explanation as to why the 'effectiveness' of aid varies across countries. The chapter utilises equations to test the effectiveness of aid and comes to the conclusion saying that empirically it is impossible to establish any statistically significant correlation between aid and the growth rate of GNP in developing countries. Theoretically the model adopted in the chapter assumes utility maximisation in the public sector, but it allows room for an enormous variety of behaviours in the use of aid money according to the preferences which public sector decision-makers demonstrate between tax reduction, expansion of 'productive' expenditures, expansion of non-productive expenditures and other objectives of government policy. The donors should concentrate their aid on countries in which the 'effectiveness' of aid is high, and that such conditionality to raise aid 'effectiveness' should be keyed to policies which will bring about improvements. However, it will be important to examine an individual country and find out why the causation runs. Chapter 10 of Part C entitled "Capital, Foreign Exchange and Growth: The Two Gap and Labour Income Floor Views" by J. Waelbrocek of Belgium compares two theoretical descriptions of the mechanisms through which balance of difficulties affect welfare and growth: the two gap model and the Labour Income Flow (LIF) model which uses fixed-price equilibrium theory. This chapter stems from the author's interest in the global development models built in the World Bank by Hicks and associates (1976), and by Gupta and by his involvement in coordinating the construction of the Third World Bank global model. The first two were based on two gap theory, the third on fixed price equilibrium theory. This paper reflects the formulations used in these three models. Section 2 presents a simplified LIF model and a two gap model pattern. Section 3 analyses the impact of aid in the two models. The

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Fourth Section compares the properties of the two systems. The two gap model was developed by Chenery and Bruno. The other is the Labour Income Floor hypothesis hinted by Lewis, which stresses the resistance of powerful groups of the population to cuts in their per capita income. This approach explains the difficulties of developed countries where real income rigidities are strong.

Part D, Chapter 11 entitled "The World Bank and the World Poverty" by Kimmo Kiljunen of Finland says that most of the World Bank operations are not directed towards the poor. In recent years, several structural adjustment efforts by the LDCs were made in the context of structural adjustment and sector adjustment lending. Non-project lending is expected to increase sharply over the next few years. In the process, the LDCs have been forced to take on a greater burden of global adjustment, since most donor countries have refused to expand financial support for adjustment in the LDCs. World Bank cannot impose a panacea for global poverty problems, nor has it worked to alleviate unnecessary suffering and to limit the extension of poverty. The author suggests that more resources should be chanelled to poor countries and to the poorest people. More research should be made to develop a suitable stabilisation and adjustment programme.

Part D, Chapter 12 entitled "The Debt Crisis in the Context of Adjustment and Development with a Human Face" by S. Griffith Jones of England wonders whether debt rescheduling and new money packages to Latin American countries made any contribution towards foreign exchange constraint, without changing issues of "negative" net transfers. After the 1982 debt crisis, within industrial countries the focus was on the negative impact which potential defaults may have on the stability of their private international banks and more broadly on their economies. In Latin America the debt crisis is seen mainly on its impact on a dramatic change in the net transfers of the foreign exchange to the continent and their economic growth. Least attention was given on the human impact and the cost of debt crisis. There is potential scope for co-financing and guarantees from the World Bank to make better contribution. Section 2 examines briefly Latin American debts' seriousness and its impact and link with international financial flows. Despite a small recovery in 1984, the region worsened its economic crisis since 1930. The evolution of the industrial economies since 1979 had negative effects on Latin America's growth prospects, which were amplified by the policy mix followed by industrial countries to achieve their objectives and the peculiar characteristics of the system of international financial intermediation. Simultaneously, interest rates were escalated, net inflow of capital declined, and there was a sharp fall in international commodity prices. Further cost of servicing also increased due to previously contracted variable interest debt. Section 3 reviews different proposals made to deal with debt crisis and evaluated them by emphasizing their impact on the largely neglected human dimensions. The author feels that in the present circumstances debtors will have to take the law into their own hands if they want any substantial relief from their present financial constraints. That is,

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unilateral action from debtor governments may be necessary to achieve the targets of cessation of 'negative' net transfer or a maximum debt servicing. These could be followed by some combination of interest 'capping' or the enlargement of the compensatory financing facility or new issues of SDRs or official guarantees to new loans. Debt forgiveness may be radical; therefore some concessionality is required not to increase the futher burden of debt.

Part B of the Chapter discusses the criteria for evaluating debt proposals. Part C explains the types of proposals for Reforms, namely broadening of partially implemented adaptation schemes include reduction of spreads above reference rates, reduction or elimination of additional fees for rescheduling, multi-year rescheduling to consolidate loans maturing within a fairly long period during a single negotiation, larger maturities for debt rescheduled and for new money, increased World Bank co-financing in the context of the 'rescheduling new money' packages and increased official insurance or guarantees provided by national (Exim Bank) or international (World Bank) institutions, again in the context of agreed "package deals". Measures like new SDRs, expansion and adaptations of existing compensatory financing facilities, interest capping of various types, increasing repayment flexibility have the advantage that they could technically be implemented with relative ease and promptness. The main problem is that they either imply a further increase in the debt outstanding or do not reduce its value; as a result, the problem of 'debt overhang' is postponed rather than reduced. Under more fundamental reforms, the radical reforms (a) encourage new private credit flows; (b) enhance the stability of the international banking system and of flows of private lending to developing countries, and (c) reduce the 'debt overhang'. The author concludes the chapter by pointing the proposals that reduce the value of debt service. Measures like guarantees, higher World Bank lending or co-financing are more equitable internationaliy and therefore need more attention.

Part D, Chapter 13 entitled "Australia's Payments Deficit, Trade Pattern and its Trade and Aid Policy towards Low Income Asia and Africa (with special reference to South Asia)" by K.C. Roy of Australia explains that Australia's current economic policy towards poor Asian and African countries is quite inappropriate to its current and long term economic interests. The voluntary aid agencies believe that Australia's current aid programme is being channelled to squeeze the poorest, weakest and most vulnerable groups in the world. Since East European economies offer a significant scope for the expansion of Australia's merchandise and services trade, a change in Australia's economic policy towards these countries is called for. The author is of the opinion that India should rank higher in Australia's aid programme. The chapter provides 13 tables which are very helpful for future research work.

Part E, Chapter 14 entitled "A Lost Generation? Why Latin American Development Depends on Growth, Surmounting the Reverse Transfer Problem of Debt" by Clark W. Reynolds, USA states that Latin America has already lost a decade from its path of Economic development with social and political

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consequences which not only threaten the stability of the region but also the international system. Long swings were observed in the commodity terms of trade, resource rents, real interest rates and real exchange rates. This swing is largely on raw materials and primary product exports. Table 1 (p. 322) provides export values by country and major commodity export values for selected years to show how the trade pattern has changed between the 1970s and 1980s. The estimates of resource rents in Table 2 (pp. 324 and 325) indicate a highly positive trend in the 1970s not only for oil but also for agricultural and other mineral exports. Table 2 also shows the windfall, the OPEC-led oil price increase of the seventies. Brazil experienced a significant increase in energy costs that would have to be set against their increased rental income from other commodity exports. Though the commercial banks took the advantage of oil shock, and started lending more, yet OPEC gained increased resource rents. Lord Keynes used the term 'transfer problem' in 1920s, yet the contemporary 'transfer problem' of the 1970s, involves the impact on real resource transfers from a sudden shift in the commodity terms of trade. Needless to stress the growing economic interdependence between Latin America and the international economy in the 1970s. Under the title 'The Debt Crisis: Reverse Transfer Problem of the 1980s', it explains the reverse that took place beginning in 1981. The impact on Latin American countries of the simultaneous decline in terms of trade and rise in real interest rates led to a sharp cutback in the region's imports from the OPEC countries and an unprecedented increase in its exports. The reverse transfer problem could also be measured in terms of drastic declines in real wages and living levels for the majority of Latin America's population. The question of this paper is whether another decade will be lost before development can be restored. This chapter also gives quite a number of tables which provide ample evidence for further research.

Chapter 15 of Part E entitled "Negative External Financing: Trends, Consequences and Options for Latin America" by Ricardo F. French-Davis of Chile, observes that net negative transfer amounted to annual average of US$ 28 billion in 1983–86, vis-a-vis declining exports (Table 1, p. 357). The key determinant was huge transfer of financial resources to the creditor banks. This paper explores various tendencies along with consequences observed and the tasks to be taken up for external financing, the negotiation framework and national development strategy. The management of the debt crisis has proved costly for Latin American countries. With regard to restructuring debtor-creditor relation the crucial problem is the size of the interest payments resulting from a high stock of the debt and the real interest rates. The crucial point for debtors is the eventual loss of trade credit. The stable solution would need an overall change in the fremework where specific bilateral negotiations are conducted. The new approach would include extended maturity terms for rescheduling, interest payments below market rates, some write off particularly of private debt contracted originally without public guarantee and contingency clauses. Net lending by multilateral banks should be increased and conditionality revised. Of

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course this can be done only when LDCs cooperate, but also with less 'unilateralism' on the part of North.

Part E, Chapter 16 entitled "Capital Exports and Arrested Development: Notes on the Debt Crisis and the Developing Countries" by Norman P. Giavan of Jamaica tells that the net financial outflow from the debtor countries runs at over $24 billion a year representing a net change of about $ 60 billion a year since 1980. Transfers on this scale are only possible with severe cuts in consumption (living standards) and investment (future growth) besides with measures like devaluation. What is needed is that a growing ratio foreign financed investment to GDP should be accompanied by growing export GDP ratio. Rising foreign lending/GDP and Import/GDP ratios should go hand in hand. Moreover, there must be a system of international payments that is adequate to requirements of capital flows, trade and debt servicing. The continued escalation in debt now comes in context of most painful efforts at adjustments by several LDCs.

The case of Sub-Saharan Africa shows the consequences of declining official inflows with continued deterioration of primary commodity markets. Even a modest level of net lending of 5 billion per annum would make a useful contribution to net inflows to debtor countries. The approach to the debt crisis should be made within the perspective of an interdependent development-oriented world economy. Responsibility, both for its origins and for its solutions is to be shared equitably by all the participants. Debtor country governments need to acknowledge a greater role for their domestic private sector role in solving the crisis, as it involves the private sector use of (past and future) inflows. Besides the need for reversing the net outflow of resources from the developing world, there is a need to absorb the exports of developing countries by the developed world. There is need for effective policies for the identification and development of efficient enterprises, rather than pressure to engage in blanket privatisation and abandonment of protection.

Chapter 17 of Part E entitled "From Adjustment and Restructuring to Development" by Osvaldo Sunkel of Chile emphasises that there was positive development in Latin America during 1950s and 1960s. In 1970s due to neoliberal reaction in economic policy the role of the state was reduced and started relying on the market mechanism. In 1982, debt crisis started transferring 3 or 4 per cent of its GNP. The author concludes by pointing out that Latin America will have to develop a credible negotiation position to threaten important institutions and groups with considerable costs. Without hard pressure and negotiating positions, the author feels that there can be no negotiation. The author further says that Latin America will not be taken seriously or even be considered without such attitude.

Chapter 18 of Part E entitled "Some Determinants of Foreign Aid to India, 1960–85" by Ira N. Garg and Haider Ali Khan of USA analyses the level of aid received and how this level has changed over time. The authors not only identify the sources of aid but also distinguish the types of aid given. This study

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analyses a number of interesting characteristics of the flow of aid to India. The authors pursued a factor analytic model which classified the donors into four groups each with different political and economic motivations for giving aid to India. The donors consider the trade-balance situation more than domestic growth conditions in giving aid to India. The chapter reveals important differences in the determinants of loans and grants given to India by various donors.

Chapter 19 of Part E entitled "External Debt: SSA's Emerging Iceberg" by Reginald Herbold Green and Stephamy Griffith-Jones of United Kingdom wonder that Sub-Saharan Africa (SSA) does not figure in the world debt crisis negotiations as critical to the global financial system. The SSA debt levels have by no means been within servicing capacity historically. Between 1981 and 1982, total African external public and publicly guaranteed debt outstanding is estimated to have increased seven-fold representing an average annual rate of growth of about 22%. With relatively slow export growth, the ratio of total debt disbursed to annual export of goods and services grew from 71.8% in 1975 to 215.8% in 1984.

The rapid rise in African external debt has not been accompanied by an increase in foreign reserves. A final characteristic of the evolution of the structure of African debt since the mid 1970s is that the traditional creditors of African countries have actually increased their share of African debt rather significantly, while the new creditors have decreased their share. Debt rescheduling is necessary. The authors suggest that for five years substantial relief should be given on (1) principal plus consolidation of arrears of interest. (2) Principal at interest rates at the most not above those currently paid (or unpaid). (3) With 15 years (say 10 to 20 years depending on the country) subsequent repayment; (4) Plus roll-over of IMF drawings effectively to provide interim circulating trade finance until recovery. (5) Plus suspicion back to sleep and normal short term trade and bank credit. The authors have given fine tables which are very useful for future research on the subject.

Chapter 20 of Part F entitled "Government Regulations, External Financing and Economic Performance: The Case of Korea" by Rainer Schwehiekert of Germany identifies empirically the effects of FDG and aid flows on investment, domestic savings and economic growth. The investment and growth responses of both FDI and debt inflows were supposed to be stronger than in the case of aid. In the case of Korea FDI and aid played only a marginal role in the external financing of Korea. Two major effects are expected from the policies pursued by Korea. First, the external financing structure of Korea will shift towards the pattern considered as optimal by the agent-principal model under cooperative transfer conditions. Secondly, the policy re-orientation is well suited to improve the efficiency of foreign capital inflows. Financial markets in Korea remained segmented although interest rate differentials among industrial sectors were substantially reduced since 1982. The liberalisation programme should be extended to capital markets in Korea to accelerate and facilitate the desirable

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shift towards more equity participation and to further improve the efficiency of capital inflows. Restrictions concerning to equity participation of foreign investors should be abolished to widen the potential of risk sharing, to attune the servicing of foreign obligations to the ability to pay, and to diversify the sources of external funding. Foreign investors should be allowed to participate in Korean listed shares and at the same time Korean enterprises should be allowed to list their share in international Stock Exchanges. The current engagement of foreigners in Korean capital markets is largely restricted to indirect forms especially through the Korea Fund, i.e., a closed-end investment fund offered during mid-1984. The chapter offers very useful data through tables.

Chapter 21 of Part F entitled "Oil Prices and Third World Indebtedness—Is There a Linkage?" by Ibrahim F.I. Shihota of World Bank, USA, starts the chapter by seeing "causal linkage" between the oil price rise of 1973–74 and 1979–80 and the inability of developing countries to service their debt. The oil exporting countries deposited their money in industrialised countries. However, it should be observed that the LDCs which enjoy large surplus are primarily oil importers, not exporters. In fact, some of the countries with the highest ratio of medium and long term debt to GNP among the 'heavily indebted countries' are oil importers (Table 2, p. 486). Commodity prices declined sharply (Table 3, p. 487). Since 1982, no country with debt problems reduced its debt ratio. According to the forecasts made by World Bank Staff (Table 9 and Chart 6, pp. 513 and 514) by the end of the century, oil prices in real terms will have recovered to about the level they had in 1974. This level should provide adequate incentives to develop new oil fields and promote energy conservation.

Chapter 22 of Part F entitled "Stabex and Commodity Export Compensation Schemes: Prospects for Globalization" by Adrian P. Hewitt of England says that stabex supplies a measure of export earnings stabilisation support provided by the EEC from an aid fund, for a number of African, Caribbean and Pacific countries under the terms of the Lome Convention. The system of stabex is designed to mitigate the ill effects of earnings, shortfall or agricultural commodity trade with the EEC without intervening directly in the market. The ACP position is to support stabex since it provides them with soft aid inflows in the foreign exchange of their choice which appear to them to be additional to the more slowly disbursing project aid from the EEC which is agreed upon in each five year indicative programme. Many of its shortcomings arise because it is a scheme giving partial coverage. Section 4(a) analyses the proposals made by Germany for a complimentary earnings. Germany focusses firmly on international commodity policy. Section 4(b) reviews the IMF compensatory financing facility which is not restricted to commodity earnings or regulated on an individual commodity basis. Section 4(c) considers the findings of the UNCTAD Expert Group on compensatory financing of 1984 which made proposals towards a complimentary global scheme, and Section 4(d) with an examination of the EEC's proposed extension of Stabex to the non-ACP least developed countries. The chapter concludes whatever the EEC's intentions in

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extending the scope of the stabex scheme to a handful of non-ACP developing countries, in this international climate it is unlikely that a fully globalized export earnings stabilisation scheme will emerge with full western support for some time to come.

Chapter 23 of Part G entitled "Debt Problem: What Next?" by Dragoslav Avramovic of USA says that the present debt situation is unfavourable. The author suggests a six year arrangement for the LDCs including: postponement of amortization; part payment of interest in foreign exchange; part payment of interest in local currency, deferal of part of interest and its conversion into a new loan due in foreign exchange. It is also suggested that countries benefiting from interim arrangements establish a collective insurance fund to guarantee future interest payments fully payable in foreign exchange. Existence of such fund would upgrade the value of debts due to greater security, and it should be possible to negotiate an improvement in the loan terms including a reduction in the rate of interest once the fund has been built up to the required size. The author suggests further modalities of insurance.

Chapter 24 of Part G entitled "The International Monetary System: Present and Future" by Dominick Salvatore of USA reviews the working of the present international monetary system and the reasons for its inability to solve the major international economic problems and also the likely future monetary system. The system was jostled by two rounds of large oil price increases (1973–74 and 1979–80) which resulted in digit inflation and in recession. The shortcomings of the system are the large volatility of exchange rates, the gross and persistent misalignments of exchange rates, and the failure to promote greater coordination of economic policies among the leading industrial nations. Leading industrialised countries are not willing to give up control over their money supply. Sections IV and V of the chapter discuss alternative monetary systems and the formation of three new currency blocs with more flexible rates among them within each bloc.

Chapter 25 of Part G entitled "Siphoning Off Resources from the Periphery: The Relevance of Raul Prebisch's Thinking for the Eighties" by Kunibert Raffer of Austria explores various elements of Raul Prebisch's work relating to the Siphoning off of productivity gains of value added from the periphery, since Raul Prebisch's thinking and the later unequal exchange theories are interrelated. This paper is illustrating the relevance of his thinking in the light of the recent evolution of commodity prices. Raul Prebisch centred his attention on the mechanisms of foreign trade and technical progress since export earnings played a major role in Latin America's progress. Kindleberger (1956, p. 246) concludes that "the terms of trade favour developed and run counter to under-developed countreis." Though it is not identical to Prebisch/Singer, yet it means practically that net barter terms of trade moved against peripheral countries—raw material exporters. Kindleberger (1956, p. 272) did not relish to call it as "exploitation", but writes:

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> "In our terms this means merely a higher degree of interference in the price making process. The greater interference has two aspects: First, greater capacity to affect the price-making process, because of less elastic demand and more control over supply; second, a more frequent use of such advantage."

The author says if this is not exploitation by trade, however, it might be difficult to find an acceptable definition of exploitation at all. Unequal exchange means increasing exploitation. Prebisch's argument of siphoning off a development stimulus is reinforced by unequal exchange theory. All unequal exchange approaches study 'real' income drain from the LDCs to centre; the revenue per unit actually received by exporting LDC is often lower than FOB prices and to study 'net' barter terms of trade. The author concludes that Prebisch's findings are highly relevant for development research in the 1980s.

Chapter 26 of Part H entitled "Multilateral Aid to Developing Countries" by H.W. Singer of England says that much bilateral action is a co-ordinated action by giving an example of ODA which has been linked with aid - consortia or consultation groups. The learned professor points out that better coordination of bilateral aid can go a long way towards achieving the advantages of multilateralism by giving an example of a drawback of bilateral assistance compared with MODA in the tying of aid to the products of the donor country. To use the author's words, multilateral aid is a fraction of a fraction of a fraction of a fraction and the total MODA is only a fraction of ODA. The Brandt Report suggested a number of changes in MODA (p. 652 to 656). The existing facilities (compensatory and EFF) need to be expanded and made more functional to overcome the problems posed by the current conditions in the world economy.

Chapter 27 of Part H, entitled "Europe 1992 and the Developing Countries" by Louis Emmeriji of France says that by the end of 1992, the EEC is supposed to be truly "common", that is the 1992 Europe will not be a "Fortress Europe" but a "Partnership Europe" and it will be in "locomotive action" and will thus be a benefit to community and non-community countries alike. The 1992 Europe will not mean protectionism because the community has a fundamental stake in the existence of free trade and open intentional trade, but also the Uruguay Round, the MFA, the GSP and Lome Four. The chapter discusses matters based on probabilities rather than certainties. The author says that though the 1992 Europe will provide the biggest market, the developing countries must constitute into regional economic blocs. The author recommends the creation of a fund for coordinated research.

Chapter 28 of Part H entitled "Measuring capital flight from the Indian Economy" by Benu Verman-Schneider estimates the magnitude of capital flight from the Indian economy based on the balance of payments data. Capital flight was probably not induced by macro-economic events, but rather by political threats to rent-seeking activities. The case of India underlines the need for country-specific models to measure capital flight. While Latin American

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experience with capital flight is largely explained in terms of over-valued exchange rates, budget deficits, inflation and build-up of external debt, the experience of Philippines shows the role of political instability in building up of external debt. The combination of corruption, political changes and policy decisions contributed to the flight of capital from the Indian economy. This chapter is very useful to the students who may do research on this topic.

Chapter 29 of Part H entitled "Growth-oriented Adjustment Lending: A Critical Assessment of IMF/World Bank Approaches" by G.K. Helleiner of Canada suggests that the 1980s show a new approach to policy leverage on the part of external sources of finance for developing countries. The "new conditionality" is intended to move beyond the traditional IMF type by addressing the need for "growth-oriented adjustment". Just as the IMF has been criticised for the oversimplicity and inflexibility of its short-term models and approaches, the bank now attracts criticism for the generalised character of its recommended development policies.

Chapter 30 of Part H entitled "World Economy Forecasts and the International Agencies" by Sam Cole of University of Buffalo, USA, observes how efforts have been made to forecast world economy from the last decade by different agencies. These forecasts appear to show a systematic and unwanted optimistic bias. World Bank prepares forecasts for the Annual World Development Reports. Taken together, the constraints of conditionality and the growth of planning in developing countries mean that the impact of the forecasts reviewed in this paper is increasing.

The editors have done an excellent job compiling various papers on the subject from eminent experts throughout the world. The editors took due precaution to publish all the details in the chapters. Each chapter has been well documented. The research students on the subject and on interrelated topics will get maximum benefit to prepare their theses by giving a reading to the book. The subscribers had the guts to present the facts. The suggestions in the book are well supported by consistent data base. They have certainly advanced the knowledge on the topic. The book is a must for social scientists and for policy makers. In total it is an excellent volume which deals with Aid and External Financing in 1990s.

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MINI-NIEO

By KILJUNEN, Institute of Development Studies, University of Helsinki, 1989.

Reviewed by Dr. S Shiva Ramu, Professor, Indian Institute of Management, Bangalore, India.

The Norwegian government initiated Mini-NIEO in 1983 between like-minded countries and the nine members of the Southern African Development Coordination Conference (SADCC). As this did not succeed, the five Nordic countries initiated Nordic-SADCC in January 1986. This was considered as an innovative initiative towards regional collective cooperation. The Institute of Development Studies at Helsinki University organised a symposium in November 1986. The present volume is the revised version of the papers submitted in that symposium. The volume has three parts. Part I deals with the Mini-NIEO and Nordic Initiative, Part II deals with North-South Regional Arrangements and Part III with Special Preferential Measures.

Part I has got nine articles. They deal with the concept of Mini-NIEO in the context of North-South Dialogue. Though there was an initiative of North-South level discussions started in 1964 under UNCTAD and a full-fledged NIEO at UN General Assembly in 1974, there was very little positive outcome. It deals with the lessons of three sets of negotiations, viz., Common Fund between 1977 to 1980 in UNCTAD, second on Codes of Conduct for TNCs and third on Convention on the Law of the Sea between 1973–82. The first negotiations on Common Fund failed to emerge due to three-worlds negotiating structure adopted within UNCTAD. The second issue of Codes of Conduct for TNCs resulted in voluntary codes and raised several issues relating to national sovereignty. In the negotiations of Convention of Law of the Sea, there emerged a division of North-South in their negotiative stands. From these negotiations it was clear that an international NIEO is difficult to initiate.

In this context, the emergence of Mini-NIEO has to be analysed. This is further elaborated in Ranold Green who tries to analyse different options to South countries. As there is "dead-end road" for negotiations, Nordic SADCC initiative was considered as an unconventional regional coordination grouping. Helge Hveem looks at Mini-NIEO and Vulnerabilities of Southern Africa. There is asymmetrical relationship between Republic of South Africa and nine other SADCC countries. Most of these countries are underdeveloped and non-industrialised. This Mini-NIEO concept is considered as a flexible response to the breakdown of the global NIEO process.

Kimmo Kiljumen describes the development of Nordic-SADCC initiative and gives basic data about the nine South African countries and their trade relations with Nordic countries. The Nordic initiative is not a response to the new debate but a logical continuation at a regional level of the Nordic countries' bilateral programmes with individual SADCC countries. While Asbojorn

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Lovbraek describes the initial failures of the original expectations of like-minded groups initiative. Further, Guttorm Vik tries to relate the NIEO concepts vis-a-vis Nordic-SADCC initiative. This initiative can lead to three different interpretations. One as a subset of NIEO applied to all countries, second, NIEO applied between a subset of countries, and the third, subset of NIEO applied to a subset of countries. In this context, Nordic-SADCC belong to the third interpretation. Oliver S. Saasa tries to describe the international support for SADCC. The origin of SADCC was a declaration in 1980 by nine African countries and a Memorandum of Understanding was signed on July 20, 1981. It aimed primarily at coordinating the regional members' development. Lacson Mzonde Chizinga deals with the local problems of SADCC case. Many of the SADCCs cannot enter into binding contracts with a third party as its sectoral committees are governed by conventions which are adopted by the Council of Ministers and ratified by member states.

There is a suggestion by Claes Brundenius and Vegard Bye that a similar Nordic initiative should be done for Caribbean islands.

Part II deals with the several regional arrangements in operation. There are ten articles in this section. Hopkins gives a brief historical perspective and evaluation of British Tariff system. It is difficult to deduce from historical records the gains and losses incurred under both close and open tariff regimes. It is difficult to get lessons of history in this regard. Jackson Karunasekera deals with Commonwealth Preference System. The analysis is limited to the preferences given by Britain from World War II until 1973. He gives an evaluation of such preferences. The analysis indicates that there was inadequate stimulation for export growth in a preferential area due to various supply constraints. Jacques Marseille deals with French Colonial Preference System. The changing trade relations between France and the erstwhile colonies and removal of preferential tariff "had not proved very salutary for the zone". Free trade has damaged rather than helped the colonies. Jacques Vanderlinden deals with the preferential arrangements between Belgium in the Kongo (Zaire). However, the system led to dependence of one partner on the other and "it is a poor source of inspiration for the present state of policies".

Christopher Stevens deals with the Lome Convention. It is a Mini-NIEO concept instead of neo-colonial preferences. However, according to this approach, "the danger for the mini-NIEO idea is the evidence that Lome practice provides on the effect of aid bureaucratisation". It has not led to any radical transformation in the economic or political situation of ACP (African, Caribbean and Pacific). The Lome is also analysed from the angle of South by Mwesiga Baregu. The major problem afflicting such negotiations is cartelization which will lead to vulnerability of ACP countries as there was limited or lack of necessary skill in ACP countries. They were not able to arrive at optimum agreements with EEC countries.

There are two articles on the Caribbean Initiative. Stuart K. Tucker describes Caribbean Basin Intiative between US and Caribbean countries in 1983. Then it

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was initiated by President Reagan in 1981. He analyses the four years record of its existence and finds it disappointing. The author feels that "success will require well formulated complementary programmes in addition to preferences". The CBI is further analysed by Henry S. Gill in respect to trade. He finds that the CBI initiative "excludes precisely those products in which Caribbean Basin economies are most competitive". This has been further commented upon by *The Economist* (August 25, 1990). Regarding CBI II signed by President Bush on August 20th, 1990, it says, "America remains to the Caribbean a Godfather more generous in promise than in delivery." CBI initiative excluded textiles and tourism which are the most successful businesses of Caribbeans. Then there was small increase in non-traditional exports in 1980s. This was not sufficient to offset the iniquitous cuts in the quota of sugar. However, it expects that with President Bush's announcement in June 1990 the programme called "Enterprise for the Americas" may lead to a true free trade zone on the continent.

Laszlo Lang deals with East-South relationship and finds that there are no NIEOs in action between the East European countries and developing countries. Most of the "overt" preferences are comparatively for clearing settlements and counter-trade arrangements. The last article by N. Markov, in this section, deals with cooperation of the Soviet Union and developing countries. He expresses a hope that the new reconstruction of the economic mechanism of USSR may lead to more prospects for cooperation with developing countries.

Part III deals with some special preferential arrangements initiated. Brian Van Arkadie deals with the special arrangements for the least developing countries. However, the author finds that the review by UNCTAD of the SNPA is not encouraging. The Nordic countries cannot really offer an alternative to the multi-national agencies simply because of lack of resources. Gary P. Sampson deals with Trade Expansion through the Generalised System of Preferences. A simulation exercise was done with respect to Nordic and SADCC countries about the effect on trade of removing tariff barriers. But the exercise reveals, "Trade creation and diversion was found to be insignificant."

Adrian P. Hewitt deals with "Stabex: The Scope for Alternative Schemes". Sysmin is a loan facility for the mining sector of some ACP states. Most of these are a reaction of a political response to the events in ACP countries. However, there is some success in Stabex scheme which may be considered in Nordic countries in their Mini-NIEO initiative. Stephany Griffith-Jones deals with "The IMF Compensatory Financing Facility" which was introduced in 1963. However, he suggests several modifications of CFF in terms of quota limits, flexibility of repayment interest rate variations and other conditionalities.

There are two articles on Counter Trade. One by Stephen Jones which deals with North-South counter-trade. The author suggests a few clearing agreements and buyback arrangement systems for Nordic and SADCC countries. Andrej Kumar deals with counter-trade in the context of North-South Trade and feels that it will affect the transparency of international trade flows. The proposal of

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ITC is to be implemented which may lead to facilitate the increase in value and economic efficiency of counter-trade transactions. Andre Raynauld deals with "Concessional Financing of Imports in Developing Countries", "the present ODA (Official Development Assistance), "*Liaisons dangereuses* between aid and trade have been institutionalized over the years." Most of these studies indicate that the aid-giving countries are subsidising their highly protected industries. Credit facilities may create trade but if it is tied to purchase in the associated countries, then there is a chançe of diversion at the expense of third countries. This may hamper promotion of South-South Trade.

Caj Linden deals with "LDC Export Promotion Measures" and Marjan Svetlicic deals with "Investment Promotion Measures". Finally, Sven Ohlund deals with "Investment Promotion Funds in the context of Mini-NIEO Initiatives".

The above articles give an exhaustive coverage of various aspects initiated by several regional North-South Cooperations in operation at present. It analyses in detail the present initiative of Nordic-SADCC as a model for Mini-NIEO in the absence of successful global negotiations. This book is highly recommended to the students of International Trade, and the negotiators and policy-makers involved in international negotiations.

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with a strong continuity of political leadership and economic policy. It had not undergone a Cultural Revolution type of experience; it does not have the ideological rigidity that characterizes China, although its leaders and intellectuals regard its system as "socialistic"; it did not undergo the destruction of its old institutional structure and has not been attempting to create a new one by the reforms. That meant however that it does not have China's flexibility and range of options institutional creation, although it also has a stability China lacks. Among the institutions it has are a Constitution and court system that set and interpret the framework within which the central and state governments function, as well as the legal framework for state-individual relations in both political and economic areas. In the economic sphere it has an effective and knowledgeable central bank, in the Reserve Bank of India, and a widespread banking system under the central bank's control. The existence of these macroeconomic institutions and the general consensus on economic policy, have prevented the sharp oscillations of policy and results that have characterized recent Chinese economic history.

India too has had a more or less stable institutional structure in the agricultural sector since the early 1950s. This has meant that it could not benefit from the institutional changes in agriculture that initiated China's reforms. The concentration of economic power in the Center too, with the very limited delegation of powers and resources to the localities has meant that India has not had the great stimulus to local industrial growth that China achieved. In that respect India's reforms have achieved less than China's in terms of rural industrial growth and employment but India has also not been troubled by the inflationary spurts that have periodically disrupted China's development since 1980. (India's macroeconomic control system would probably have been able to prevent these however). While India has not had such inflationary spurts the past decade has been characterized by a steady 5–10 per cent rate of price increase. This may have been stimulating for industry but over time it may have harmed large groups within society.

India's reforms like China's have sought to encourage growth of high-tech and consumer durable industries, but in India these have tended to benefit the top income deciles of its society—and far less the broader rural population, or the unorganized urban sectors. This concentration of benefits, together with an extent of corruption that has become more apparent since the reforms began, contributed to the loss of momentum of the Indian reform process, and eventually to Rajiv Gandhi's election defeat.

What of the futures in the two countries? In China the reform process has contributed to rapid growth but the partial reforms have created other economic problems, as well as leading to sharp cycles of inflation

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table wage payments; rural patron-client systems also assume certain mutual responsibilities and exchanges between patrons and dependents.

The great difference lies in the two differing political systems. Under China's communist dictatorship there was a destruction of much of the preexisting economic, legal and control framework of the economy, which was replaced by a highly centralized party-led rule. Ideological issues were of major importance and conflict over such issues was violent and disruptive, culminating in the Cultural Revolution. The experience of the Cultural Revolution was a major force for drastic reform of the economy in order to accelerate its modernization and growth. The reforms introduced major institutional changes in the economy first in the rural sector, which quickly increased incomes there, but then in the urban sector, in which the reform process was much more piecemeal, in part because of the differences among the leadership, in part because of ideological issues, in part because of regional and bureaucratic conflicts. The enterprise autonomy measures and the delegation of substantial economic powers and resources, including foreign exchange, to local and provincial agencies also meant that the central government lost control of much of the country's investment. That combination, together with the absence of any effective macro-control mechanism, contributed to sharp fluctuations in prices and trade balances—prices rising at high rates of inflation and reserves falling—followed by reintroduction of strong centralized controls to correct both situations until the controls could be relaxed again. That delegation of powers and funds to localities had a very stimulating effect on both industrial growth, much of it desirable, but it also had the dangers noted above, and may have resulted in some "uneconomic" investment. The reforms too were partial; there was no general price reform freeing prices from control for a long time, because of the fear of inflation, and when one was attempted it failed for that very reason. At the same time the two-track price system which combines fixed prices and allocations of some output by the government, with market pricing for the remainder, contributes to a large increase in corruption during a period of rising prices, since the differences between the fixed and market prices are both large and also increasing. The moral restraints on corruption-like behavior also decreased as wealth and "becoming rich" became not only acceptable but desirable individual goals. The result of these combined factors was widespread urban unrest as living conditions deteriorated and rising expectations were unfulfilled. This culminated in demonstrations, which the Party leaders felt threatened their rule, martial law and the Tianamen Square repression on the political side, as well as the ousting of the more-reform-minded leaders. It also led to a sharp tightening of central controls and the holding back of reform on the economic side.

India's reform process was much more moderate. It is a democracy

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answered some of the voting public's questions, there was less reason to vote for the initiator of the accelerated reform program in the election.

A possible positive result from the election is that the newly elected government may decide to present its own reform program to the Parliament. (V. P. Singh was Finance Minister during the first years of Rajiv Gandhi's reforms.) If that program avoids the limitations of Rajiv Gandhi's effort by presenting a broad rationale for reform, among others, things spelling out the expected benefits from the reforms for the entire population, and if it also cuts the close connection between business and politics under the ongoing regulatory system thereby reducing corruption, it might win the broad popular support that Rajiv Gandhi's reforms lost after the first two or three years. If V. P. Singh does not do that, the defeated Congress Party might also do that as a way to achieve a majority support once again. This is the path Indian economists advise; this time the political demands may be in harmony with that advice. Thus future economic reforms in India would contribute to the strengthening of democracy in the country.

In conclusion I will briefly summarize some similarities and differences in reform processes in the two countries. In both countries the character of their economies and of their development problems, contributed to the similarities. These are in terms of the longer range goals of development in both countries, and the need for policy changes to achieve those goals. Pre-reform policies in both countries had similar emphases; the reforms sought to change both the emphases and the methods to achieve the goals. A major direction of the reforms was to increase autonomy of the enterprise managers and the businessmen who managed the industrial enterprises, while at the same time raising the incentives for desired behavior. In both countries, because of their size or ethnic mix, issues of regional development and equity have been and are of major political importance. These create issues of support for enterprises that may be socially or politically important even if economically inefficient, and thus limit using only economic criteria in judging their viability. Similarly in both countries, because of their size and rapidly growing labor forces, issues of employment are of major political importance and set social limits on shutting down financially weak firms. These limits are strengthened by the absence of widespread social insurance or labor retraining schemes in the two countries. The larger enterprises have in fact been given various social functions, performed by the state in other countries, which in turn limit their concentration on economic returns. In both countries too, reflecting their characters as both socialist societies and peasant societies, employers are assumed to have broader responsibilities for their workers as far as maintaining employment and providing equi-

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may lag behind prices. The rate of price increase is controlled, and the government has the tools to avoid higher rates of inflation; it is also not of the highly cyclical character that has been so disruptive in China. However, while businessmen may benefit from such a steady price rise, and unionized employees in the organized industrial sector and government employees can protect themselves by pressing for, and securing, wage and salary increases that at least preserve their economic position, other groups in society are penalized. They may find that their economic position has worsened rather than improved over time. The steady price rises also contribute to a climate that encourages corruption if government employees find that their real incomes are declining and they lack earnings outside of their regular pay. The government (here it resembles the U.S. government) has been unable to introduce additional taxes for political reasons, and while its revenues have increased, such current expenses as defense, various subsidies and interest on government debt have increased more rapidly. This has made it necessary to postpone investment in the agriculture sector for irrigation projects. Such postponements may have undesirable longer term consequences for agricultural output, and in India's ability to deal with future droughts. (This obviously reduces any potential benefits the rural population may see from the recent reforms, at the same time that the farmers in the 1986–88 drought-stricken areas obviously received no benefits.]

Finally there is little or no evidence that the reforms had significant positive impact on industrial employment, which apparently remained constant for larger scale enterprises and rose by only about 10 per cent for small-scale industry since 1985. This negligible effect of industrial growth on jobs was quite contrary to the hopes of the reformers and of the Seventh Five Year Plan.

The equivocal results of the industrial reform in terms of benefits to the population, the apparent concentration of those benefits in about 10–15 per cent of the population, the parallel steadily rising level of prices (even though slow) and the more obvious corruption in the 1980s certainly contributed to the defeat of Rajiv Gandhi in the 1989 election. (This is not to say that there may not have been other reasons too, that were not associated with the economy or the reforms.) The piecemeal and marginal character of the reforms resulting from the failure of the Prime Minister to present an overall rationale for those reforms or a prospectus of benefits to be expected for the entire population, as well as a range of policies to achieve those wider benefits, meant that the voting public at large had little sense of being involved in the reform process or of benefiting from it. Also there was no coherent explanation of the relation of the reforms to Indian socialism. Without such a broader framework which might have

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by the state governments are concerned, few if any, reforms were begun and any effects were negligible—certainly less than for central enterprises. This in effect reflects the close relationship between the public sector enterprises, whether central or state, with the political leaders of the governing party whether at the central or state level, and the difficulty of breaking that connection. The enterprises are political instruments as well as economic ones. Their administration is also complicated by the existence of strong, politically connected unions in many of those enterprises that are able to resist efforts to cut costs in ways that might threaten the workers or unions.

Some of the public enterprises today are "sick" firms that were formerly private but had been taken over by the government rather than being allowed to fail. Since the reforms "sickness" has increased markedly, in terms of numbers of firms considered to be sick, as a result of the increasing competition, declining prices, and massive increases in outputs since 1985. While the central government no longer nationalizes larger sick firms, there is a massive amount of bank credit tied up in supporting them. Like in China bankruptcy is rarely invoked, and for similar reasons.

An increase in exports has been one of the major goals of India's reforms. Significant increases have occurred, but imports have also been growing at only a slightly lower rate and by larger amounts in absolute terms. Thus India's annual foreign trade deficit has continued to increase as has its foreign debt and its debt service ratio. While exports are growing total exports have not increased as a percentage of GNP, and India's ability to export machinery and other engineering products at competitive prices and qualities remains low. Until recently at least, profitability of export sales had not equalled those of sales within India, although this may have changed when profits on exports were freed from taxes. This balance of payments problem may lead to reintroducing tighter controls on imports. If that is done it could have adverse effects on the continued growth of India's most rapidly growing industries since the reform-consumer durables and capital goods.

India like China has a problem of inflation. In India it is not fueled by uncontrolled local investment and massive wage increases financed by a politically dominated banking system. The Indian government has effective control of investment within the country to prevent the former. Rather it arises from the annual budget deficit of the central government which has been met over the past decade by borrowing from the Reserve Bank of India and other banks, thereby increasing the country's supply of money at a rate well above the annual increase in output. As a result the annual prices rise has been of the order of 5–10 per cent during much of this decade. This has probably stimulated business activity since costs

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was for components of such consumer durable products as TV sets and computers, whose final domestic output had increased so greatly.

Thus during the reform period and decade of the 1980s, the rate of industrial growth was at a higher rate than in any previous decades since the 1950s, and that increase was associated with a break-through to rates of growth of GNP that substantially exceeded the past "Hindu rate of growth". These growth rates occurred in spite of the fact that from 1986–88 India suffered the worst drought in its post-war history, which would appear to indicate that the close dependence of industrial and national growth of agricultural output was broken.

Another significant result of the industrial expansion triggered by the reforms was a marked increase in competition among industrial firms within India as new entrepreneurs and firms entered profitable areas of production, and older firms expanded. With that greater production and competition prices of various products fell and long waits by consumers with associated illegal or semi-legal premia for preferred positions in the lines for those products also disappeared. India's exports also increased as did foreign private investments within the country, but in neither area was the increase comparable to that of China. Securities markets boomed, with firms being able to raise a higher proportion of their investment needs by sale of their securities. This in turn reflected a much wider acceptance of private business activity as normal and useful among both government officials and the general public. Also, the opinions of business leaders on business policies that affected their activities were taken seriously rather than being automatically distrusted.

Despite these gains, however, there were serious problems with the reform process. Probably the most important one was that while the reforms eased the clearances through the regulatory mechanism the environment was still one in which close connections with government were necessary for any businessman wishing to grow significantly or to enter new lines. For a large businessman this connection had to be at Delhi; for a smaller one to his state government. Thus the connections between business and politics remained strong; corruption in the form of necessary payoffs did not diminish, and may well have increased.

While this was true for the private sector, as far as the central government's public sector enterprises were concerned, reforms were marginal. Some Memoranda of Understanding between directors and the appropriate central ministry were signed, but the number is small; there has been some improvement in financial performance on the part of these public enterprises, but the hope that they would be able to finance a much larger share of their investment requirements from their own resources has not been fulfilled. Many too are consistent loss-makers and remain dependent on government subsidies. As far as the public enterprises owned

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zation of existing plant and reduction of costs. Furthermore it was not to conflict with other government industrial goals, such as encouraging development of backward areas of the country, and protecting the growth of small-scale enterprises. Thus the Indian reforms operated within the broad framework of the country's long-term economic policies and economic controls and regulations, and it proceeded by widening the openings within the control system to reduce direct government intervention. The government too, by reducing income tax rates on individuals and rates of various excise taxes on different products, sought to increase demand in general and to lower prices of the affected goods to the consumer. It was also hoped that reductions in taxes on profits would raise incentives for businessmen to expand both in general and specific desired fields; and simultaneously reduce tax evasion and increase government receipts. The reforms were also seen as a stimuli to greater private saving and a greater willingness to invest in new securities of private or public enterprises. Government investment in infrastructure—power, transport and communications—also increased and combined with better management, resulted in a far more favorable environment for increasing industrial output by reducing those bottlenecks.

Without possible significant increases in the short run demand for industrial products from the rural sector, or from overseas, the government policies, in effect, but without public announcement, encouraged growth of industries to meet the pent-up demand for consumer durable goods among the richest 10–15 per cent of Indian households. The absolute size of this market is large, of the order of 100 million people, who in the past could not buy such Indian made products easily, because production was so low, or who might be reluctant to buy them because of their poor quality or high prices, or to avoid conspicuous consumption.[3] With the easing of controls, output of consumer durable goods, especially electronic products, rose very rapidly. In part derived from this growth but also related to the government's own capital investment programs in infrastructure, and the increasing industrial investment for modernization stimulated by the reforms, there was also accelerated growth in the production of capital goods and of such basic goods as cement and steel. These latter increases in output took place in spite of the fact that imports of capital goods were the most rapidly rising of imports, since these were now permitted far more easily than before if they were related to approved export and modernization programs, as well as for high-tech industries. Another major industrial sector which saw a large increase in imports

[3]I have earlier mentioned the apparently large amount of unreported income within India.

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with the earlier success of the reforms in both raising expectations and actually improving the well-being of the people. With little or no exchange between this wider urban public and the Party leadership on such economic issues there was wide popular support in Beijing and other cities for the student demonstrations of April and May 1989. In turn those demonstrations and the popular support they generated were felt by the Communist Party leaders to threaten the Party's rule and their own leadership. This led to their decision to bring the army in to crush the demonstrators. Parallel to and preceding that military action was economic action by the central government to directly cut back its own expenditures, to reduce investment and consumption at all levels, to tightly control the money supply, and to directly control prices in order to cool down the economy. Other decentralizing aspects of reform policy were also criticized, delayed or cancelled, and the stronger reformers were forced from leadership posts.

India has of course many of the institutional structures that China was attempting to introduce or discussing for introduction in one form or another by its reforms. These include a private industrial and service sector, markets for products and for factors with prices freely set in part, a legal framework within which economic activities occurred, a freely mobile labor force, a large part of which was technically well trained, a widespread banking system experienced in banking and an effective central bank with a range of macro-economic control instruments. Thus India's problem, unlike China's, was not to establish or reestablish a new set of economic institutions, but rather to get better results than previously from the existing industrial economic structure. While this represents a significant advantage when compared to China, there are also some disadvantages of a fixed institutional environment when the goal is reform and change. India did not have the shock of the Cultural Revolution to unite and galvanize a reform movement. India did not have the institutional and legal flexibility that existed in China, with its lack of formal institutions. India did not have the option of being able to raise its agricultural output, incomes, and demand for industrial products markedly and quickly and at a low cost, by an institutional change as was possible in China and that was introduced there at the start of its reform process. But, as in China, India's reforms were directed to giving enterprise managers greater autonomy from the state in the making of their output and investment decisions, and to raising their incentives to make those decisions in socially desirable directions. In India, unlike China, there was a large private as well as public sector. There were limits on this wider autonomy, especially for the private sector. It was to be exercised in areas that the government considered of high priority, especially in high-tech and export production but also toward the moderni-

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investment that did not oceur except briefly; heavy industry growth continued at a high rate and heavy industry output remained the largest share of the total industrial output. Significant portions of the output of "key" industries were allocated by government and were sold at fixed prices. The result was that an enterprise's profitability only in part reflected its efficiency, and was as much influeuced by vagaries of the price system. However, when an effort was made to reform the price system in 1988, it was swiftly abandoned as market prices rose sharply and panic buying occurred. While industrial productivity did rise as a result of the reforms, costs also continued to rise as increases in the wages of workers outpaced productivity increases. Managers were unable to resist pressures from workers to give equal wage increases to all workers on grounds of equity; and it was very difficult if not impossible to reduce "surplus" workers. Many enterprises remained dependent on government financial support to avoid failure and the bankruptcy law was a dead letter in the face of threatened unemployment. There are also continued close relationships between government officials and party members and enterprises, but these are now often at the local and regional levels rather than at the central level.

Perhaps the major weakness of the present partially reformed system is the absence of an effective macro-economic control system to replace the older system of direct central control. The creation of a new banking system and the requirement that enterprises get bank credit for investment funds they could not themseleves generate did not impose greater financial discipline on enterprises. With good local political connections managers could readily borrow from banks (as could local and provincial governments), and there was no pressure to repay banks since the losses of state enterprises were subsidized by the central budget, and those of local enterprises by local budgets. Most enterprise investment was now financed by banks rather than from the budget but the Bank of China had no effective control of the supply of credit or of money. Thus when investment and consumption both increased rapidly, as they did in 1988 and early 1989, money supply increased far more rapidly than output, and prices rose sharply. This not only discredited the aborted price reform effort, but, more important, led to serious political problems. People receiving fixed or slowly rising salaries found themselves worse off, and there was a growing sense of inequity. At the same time as difference between fixed and market prices for the same product under the dual price system widened, the opportunities of making money by selling on the open market items bought at fixed priecs became greater for officials or party members who had access to such goods, and this created a sense of widespread corruption. This urban unhappiness, fed by a sense of deteriorating well-being and growing inequality and corruption, contrasted

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greater availability of farm products in urban areas. Together with the reforms that delegated greater economic powers and funds to local authorities the consequence within the next several years was a massive increase in the number of rural collectively owned industrial enterprises, and in employment of farm workers in such enterprises.

The success of the reforms in the rural areas contributed to the introduction of reforms in the urban industrial areas, and urban industrial reform became official policy in 1984. The reform process in this urban sector was politically and ideologically far more sensitive than in the rural areas. The reforms sought to give enterprise managers more autonomy, reduce the role of planning vis-a-vis the market with respect to control of output and distribution decisions, reduce the guiding hands of the bureaucracy and the party over the details of management functioning, give the enterprise greater control of its own internally generated resources and investment decisions, and give the manager control of the plant labor force and relate workers' wages to their productivity. Taxes replaced the previous system of all profits going to the state. Steps were also taken to replace the system of centrally budgeted funding for investments by the enterprises, by one that permitted use of internally generated funds and bank credit from a reestablished banking system. Steps were also taken to delegate former central administrative controls over enterprises to local and provincial agencies, and to give those latter governments a share of the tax payments from those enterprises. In addition the government encouraged the starting of privately owned service and smaller manufacturing establishments, as well as collectively owned enterprises. Private wealth accumulation was encouraged and income differences were considered acceptable: security markets were established on a limited scale. Some worker mobility was permitted, higher education was expanded, and large number of students were sent, or allowed to go for overseas study. Foreign trade and direct investment were both strongly supported; growth of coastal areas was particularly encouraged and numerous special trading zones were created; provinces were given a share of foreign exchange earned by their enterprises. Both trade and investment increased very substantially. Because of some likely opposition within the Party to the direction and/or speed of such reforms they were introduced on a piecemeal basis, both to examine the effects of any one and to avoid a united opposition.

There was a significant acceleration in the growth rate of national output, while the industrial growth rate increased somewhat. However, there was a marked shift to production of consumer goods, and overall consumption also increased significantly—both of which were desired. But while the government had hoped for a decline in the growth rate of

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the appropriate interpretation of ideology and its relation practice that characterized Maoist and post-Maoist Chinese history. (It might rather be compared with the capitalist ideology in the U.S., which has historically permitted a wide range of government intervention in the economy as long as they are not labelled "socialist.") Indian socialism has been compatible with a large private industrial sector, but that sector has functioned under an elaborate system of regulations and controls. These controls seek to insure that larger-scale enterprises act in a manner compatible with the plans of other government economic policies, that they do not "waste" scarce capital and foreign exchange resources, that they do not behave in a monopolistic fashion, that they provide appropriate working conditions and welfare provisions for their workers. The nominally independent public sector enterprises operate under the same control framework, but are also overseen directly by appropriate ministries and other government agencies, and by Parliament. The central government had set up a network of development banks to provide finance for private enterprises for approved expansions; the various state governments had set up their own industrial finance corporation to provide funding for larger firms, as well as for small-scale enterprises within their state boundaries. The small-scale industrial sector was both assisted by various concessions and programs and protected from competition from larger firms. Through the RBI, and government ownership of all commercial banks, the central government effectively controlled the supply of money and bank credit for the entire economy. There is free mobility of labor within India both among jobs and between country and city.

This system worked reasonably effectively in establishing a broad industrial base for the country, and in building certain high-tech, often defense related, installations. But the rate of industrial growth had slackened in the later 1960s and 1970s, there were major inefficiencies in the use of scarce resources, India was lagging in new areas of industrial technology, India's costs of production were high and both the quality and variety of goods produced by Indian manufacturing firms were not of world standards. This was in spite of the fact that India has one of the largest pools of skilled professional scientists and technical workers in the world. These problems were not of the high-drama of the Cultural Revolution that in effect forced reforms in China, but they were sufficiently important to India to persuade Indira Gandhi and her son to initiate an industrial reforms process.

In both countries a major direction of reform has been to grant greater autonomy to enterprises. In China this first occurred in the rural sector by replacing the collective farm system by the household responsibility system. The effect of that institutional change upon farm output was very rapid, and resulted in short order in both higher rural incomes and a

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states. The British left a central banking system, the Reserve Bank of India (RBI) and a system of macro-economic policy control: the largest private bank too, the State Bank of India, was nationalized soon after independence.

In the agricultural sector there was a land reform early on after independence, which redistributed some of the land of the largest landowners, especially that of the local potentates who had supported the British. In effect land was distributed to the peasants who had previously cultivated but not owned the land, or was divided among family members of larger land owning farmers. A class of bullock capitalists, owning plots of 2.5 to 15 acres, became the largest group among the land-owning households owning over half the total land, but over a quarter of the peasants were landless, while the large land-owners with holdings of 15 acres or more still owned almost 40 per cent of the land[2]. Private ownership in land was never replaced by any other system.

Finally India, shortly after Independence, prepared and adopted a Constitution that laid out the rights of the individual versus the state, that defined and allocated the powers of government between the Central and state governments giving the major economic powers vis-a-vis industry to the Center but giving the states major powers over agriculture and energy distribution; it also allocated taxation powers between the central and state governments, which were given the power to levy excise taxes on manufactured products, and set up a system for the allocation of some central government revenues to the states. India has a legal system, which includes a law of contracts, and an independent court system to which citizens can bring cases against each other and against the state. There is freedom of speech and of the press, and a vigorous critical press in Hindi, the regional languages and English. There is a wide distribution of TV sets and radios; while the government runs the radio and TV system, it is expected to be non-partisan in its presentation of news and political events. While the Congress Party under the leadership of Nehru and his descendants has been the governing party for almost all the years since independence, there are opposition parties that are critical of its policies, some of the opposition parties have ruled in particular states for many years, and coalitions of opposition parties have won national elections first in 1977 and again in the most recent 1989 election.

There has been a broad continuity in India's economic policy framework since the mid–1950s. Ideologically there has been a broad consensus on some variation of democratic socialism, but the ideology is compatible with a wide range of policy options in practice. It certainly does not have the rigidity of Chinese ideology, nor has there been the fierce battles over

[2]L.I. and S. Rudolph, *op. cit.*, p. 336, Table 40. (These figures are as of 1971–72.)

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The domination of policy by ideology contributed to the sharp swings of policy among the three goals of equity, of growth, and of stability, that characterized China's economic history in the pre-reform period. An overemphasis in practice of any one of these goals had consequences which were undesirable in terms of the other two goals, leading to a sharp policy shift in favor of a neglected goal. One of these ideologically driven policy swings culminated in the Cultural Revolution, which was a mass revolutionary movement led by Mao to overturn the leaders and policies of the growth and stability wings of the Party, who had taken power after the collapse of the "Great Leap Forward." After a decade of the Cultural Revolution and following the death of Mao, the political and economic results of that movement and of its purges and excesses led directly to the growth-oriented "four modernization" policies and leadership of Deng.

India's newly independent government was revolutionary in the sense of replacing foreign rule by Indian rule, establishing a democratic system of government in the place of a more or less benevolent despotism, and introducing a "socialistic pattern of society" in place of a capitalist society. But the new political and economic system retained significant elements of the pre-independence system and intellectual framework. The democratic political system was largely based on the British parliamentary system which many of the new leaders knew from their own education and experience in England. The new economic system was influenced by the Soviet experience but was based far more on the ideas of British Fabian democratic socialism than on orthodox Marxism or its Russian variations. In addition the wartime economic administration of the British left an administrative mechanism and a trained administrative group that could, and would, be adapted to a war on poverty and underdevelopment following the war against Germany and Japan. The Indian industrial sector at independence was almost entirely private. This was largely retained with some marginal nationalization, but on top of that sector was established a large public sector which owned most, if not all, of "the commanding heights." The infrastructure sectors of communications and transportation had been nationalized before independence; the new power sector was in the public sector. Planning had the support of leading private businessmen as well as of Nehru. A Planning Commission was established but it was apart from the regular government ministries. With Prime Minister Nehru's great interest in economic development and planning, the Commission had a great deal of influence. Under his successors that influence diminished markedly relative to that of the regular ministries, especially the Finance Ministry which prepared the budget, the Prime Minister's secretariat and the various State Chief Ministers and other political figures insofar as the plans affected their

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development. But there were major differences in the broader political and economic structures of the two countries that determined the characteristics of the two resulting planning and industrial systems.

After the Communist revolution and victory in China in 1949 a dictatorship was established with all power concentrated in the hands of the Communist Party and its leaders. The policies of that leadership were implemented at the regional level by local and provincial party officers and government officials at the appropriate level. Within a relatively short time all private enterprises were nationalized; initially former owners were employed as managers but by the end of the first decade they had been forced out to be replaced by managers controlled by government ministries or party secretaries. Production in the factories was determined by targets set in the central plan, distribution was handled through government agencies at prices set by those agencies, all revenues above costs were sent to the government and all investment was handled through the government budget; workers were assigned to the plant by the labor agency, employment was for life and changing jobs was not allowed. Wages were determined by seniority and all workers were paid according to the same scale of wages. In the rural sector after an early land reform that redistributed land among the peasants in the villages, the private plots were rather quickly eliminated and replaced by a system of communal land ownership with production and work distribution and wages under the control of party officials of the commune. All output above that required for local needs was sold to state distribution agencies at fixed prices, and distributed by state agencies throughout the country. In this revolutionary society a legal framework embodying a system of contracts of mutual responsibility, and of limits to actions by the state with respect to the individual or the enterprise was eliminated. A similar centralization of power held true in the political field. All power was concentrated in the party and no open debate or opposition was permitted although there might be some debate within the party before a decision was made. After Mao achieved power and especially following China's economic recovery in the 1950s, ideology became the dominant factor behind economic policy with possible variations in particular emergencies or unforeseen contingencies to deal with special cases. In the Great Leap Forward of the late 1950s, in order to prevent a concentration of power and control in Beijing that might dampen local economic initiatives, some administrative delegation of power to the level of the province or locality was introduced. But this delegation of power was purely administrative and the decisions were made entirely at the Center. Since the central government controlled all funding in its budget, there was no need for a credit-banking system or a macro-economic control agency, which also had no place in Marxist theory.

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Today both China and India have expectations of a better quality of life in terms of improved health, longevity, education, and freedom from hunger and starvation, all of which were promised results of independence and revolution. Such improvement did occur in both the countries, but there are significant differences, reflecting their different approaches to those ends.

There are other similarities between the two economies. Both China and India are very large countries geographically with wide variations among their regions, with the coastal areas tending to have higher levels of development, higher incomes, greater contacts with foreign countries, and higher levels of industry and trade. China is ethnically more homogeneous than India, which places less political pressure on the Chinese government to equalize development between the different regions. But both countries have been committed to raising economic levels in the poorer interior regions and to greater equality among regions; in both countries too reasons of defense led to siting defense related industries in interior provinces felt to be less vulnerable to external attacks.

Both countries too, because of their sizes, and their position in Asia, consider themselves to be major political actors in their region, as well as in the world. This implies certain levels of industrial development, an ability to produce inputs for defense industries and military outputs, and a level of technology capable of meeting their needs for modern weapons and defense systems. Both countries have histories of foreign occupation and invasion. India was a British colony for almost 200 years before independence; China, while not a colony, had been involved in numerous wars and skirmishes with foreign powers invading and attempting to annex or control portions of its territory in the 100 years before the Communist victory. Both are strongly nationalist and are sensitive to any felt threat of "dependency" in relation to foreign countries and economic groups. Their development programs and policies reflect their strong nationalism and their fear of dependency.

Finally the new governments of both countries, after achieving independence and successful revolution, adopted programs of industrialization based in part on the methods of the Soviet Union which appeared so successful after the Second World War. These included the development of heavy industry, especially steel and the capital goods sectors with associated high rates of investment; the deliberate down-playing of consumer goods industries; and the diversion of savings and investment from agriculture to industry. Both countries adopted inward-oriented industrialization policies, in part on grounds of nationalism and/or Marxism, in part on the basis of the depressed history of world trade between the two World Wars. They both adopted economic planning and the expansion of the public sector as the instruments for the hoped-for industrial

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SIMILARITIES AND DIFFERENCES IN THE PROCESS OF REFORM IN CHINA AND INDIA IN THE 1980s

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There are many differences in the reform processes in these two countries during the past decade. No one would be surprised that these exist. They arise from their differing histories and social structures, but also and more important from their markedly different political histories and political systems since the Second World War, with the consequent effects upon their political and economic structures. What however was surprising to me, are the similarities in the economic issues that have arisen in the process of reform, which in my opinion reflect similarities in the underlying structures of these two developing economies and in some of their approaches to industrial policies since the 1950s.

What are the underlying economic similarities of these two countries? An obvious one is that they are the two largest societies in the world in terms of population, each having about one billion people with China somewhat larger. At the start of their development process each had more than two-thirds of its populations engaged in agriculture; each, as the major direction of its development policy, sought to expand its industrial sector, so that there would be significant shifts in their structures of output and of employment to higher income sectors. By the end of the 1970s each had markedly expanded its industrial sector and India also its service sector. (In China the government service sector had expanded, but not other service areas, in large part because Marxist theory regarded services as unproductive.) But in spite of this marked expansion in non-agricultural output and employment, and a growth in agricultural output that equaled or exceeded the growth of population, the proportions of two populations still dependent on agriculture remained at 60 per cent or more, while agriculture's share of the national output of each country fell to 30–40 per cent.

In both countries total national outputs had increased significantly since 1950, at rates of growth higher than during the first half of the century and higher than the growth rates of their respective populations. Nevertheless the level of per capita income in each country in 1975–80 was of the order of U.S.$. 300.00, and both countries were classed with the poorer of the developing countries. In both countries too the problem of providing employment for the labor force growing more rapidly than their populations and with rising expectations of employment was serious.

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and forced retrenchment that reflect the absence of any macro-economic control system. Corruption has also increased. These results have led, among urban groups, to demands for greater discussion of policy problems in the economic field, and for the loosening of the Party's political control. The combination of these two factors may result in continued bursts of unrest that lead to reassertion of tight central party controls over the economy and polity. On the economic side a top priority reform is the development of an effective macro-economic control system to reduce the sharp economic swings, and on this too depends an effective micro-price reform. But I am doubtful of either the ability of the party's leadership, or its willingness, to take those steps, as I am doubtful of its willingness to widen public participation in the policy-making process. Without such reforms in the future, economic reform and achievement will probably move along in a series of spurts and halts but with the spurts less strong and the halts more lengthy, as popular interest and belief in the reform process diminishes.

In India too the reform process has been partial in character, and not presented to the wider Indian public within a broader framework. These limitations on the process reduced the positive economic effects of the reforms, which were significant, but which were not felt to have benefited large sections of rural population or to have dealt with issues of equity and corruption. These perceptions contributed to diminishing public support for economic reform and eventually to Rajiv Gandhi's defeat. But the pressures of democracy may lead to the presentation of a more thorough and well-argued reform program not only with respect to the urban industrial sector, but also in the agricultural sector, by a governing party or group of parties seeking continued popular support after the 1991 national elections. If such a broad program is articulated and implemented it could lead to more rapid industrial and economic growth, with a wider spread of benefits to the Indian public than in the past. If however this is not done, and the economy returns to the relatively low rate of growth, or if the beneficiaries of somewhat faster growth are considered to be a privileged group, this might well prove harmful for Indian democracy. Then an expectant but disappointed public might well explore nondemocratic alternatives for answers to the economic policy questions, or seek improvement by such measures as ethnic or religious preferences.

This then is my final contrast of the reform processes in the two countries. The demands for continued economic reform in China might undermine the existing political system which combines a Communist party dictatorship with a significant delegation of economic power, related to political power, to local and provincial party leaders and government agencies. That political threat may narrowly limit the extent to which Communist party leaders are willing to expand economic reform in future. In India, however, the demands for continued economic reform could strengthen the democratic political system as various parties compete for public political support by presenting stronger and better-argued economic reform programs. But failure to accelerate and expand economic reform in India may undermine its democracy by weakening the support of the wider public which feels it has benefited only slightly from democratic socialism.

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AN EMPIRICAL ASSESSMENT OF ENDOGENOUS AND EXOGENOUS FLUCTUATIONS IN A GOODWIN GROWTH MODEL WITH BELGIAN DATA

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Introduction

For over fifty years, two of the main schools of macroeconomics have been delineated mainly by a prior belief about the origin and the mechanism of propagation of economic fluctuations. That is to say, believing that the economy is a positive linear system, buffeted by exogenous shocks but, moving stubbornly toward a globally asymptotically stable equilibrium makes one a positivist of classical lineage. Whereas the belief that such fluctuations are expectations-driven means nowadays belonging to a modern group of nonlinear dynamicists which, for the sake of argument, may be said to be of Keynesian lineage. Which of these two positions is scientifically sound is not really known. Yet as a consequence of lineage and belief, the positivists argue forcefully against government stabilization policies, while members of the other group are for such policies.

More to the point, it should be recalled that the debate began over skepticism as to what was the actual range of parameters of economic models. It subsequently evolved toward coherence and incoherence of extant theories, to end up presently being centered on linearity, severe non-linearity, and empirical testings.

As all theorizings over the last two decades had to be disciplined by empirical research, a good deal of effort then went into interrogating the data. For, according to some theorists (Kidland and Prescott, 1982; King *et al.*, 1987, etc.), the triple assumptions of linearity, stationarity and smallness of deviations relative to trend levels naturally led to transforming, detrending and deseasonalizing time series data at the search of constant statistical properties, goodness of fits and, hence of improved forecastibility of the future economic environment. This approach has not produced the expected results, and it is being gradually abandoned.[1] On the other hand, the opposing new constructs

[1]Theoretically the Unit Root School may be labelled positivist as well, even though its main line of argument appears to contradict the conclusion of the real business cycle model, for example. The essential difference is that according to the unit root hypothesis, random shocks would have permanent effects on the economic system if it is marginally rather than asymptotically stable. For more on this, see Nelson and Plosser (1982) and Perron (1989) as two representative viewpoints.

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(see Benhabib and Day, 1981, 1982; Day, 1983; Grandmont, 1985; Deneckere and Pelikan, 1986; Boldrin and Montrucchio, 1986; Foley, 1989, among others) had to be subjected to the same discipline; for it was not then and still is not enough to just show that anything can happen. Even if the absence of regular cyclic patterns could have been attributed to aperiodicity, one still had to show that bifurcations do occur with empirically documented parameters or actually find random determinism in the data.[2] However, this effort too remains inconclusive (see Barnett and Choi, 1989; Brock, 1986; Barnett and Chen, 1987; Brock and Sayers, 1988). And to further complicate matters, at times the data seem to support some views from both sides of the debate. Hence, priors remain entrenched, but with potentially dear consequences for economic welfare itself.

In the meantime, the economics profession is without a macrotheory robust enough to forge a consensus. Though this is not the place to review and assess the macrotheories now competing for a place under the sun, and making no claim whatsoever for accuracy, one wonders if it is not possible nevertheless to shed more light on the debate by approaching it from a different angle.

In that connection, it is interesting to note that the schematic economic growth model due to Goodwin (1967), when examined from a behavioral perspective, does offer an intuitively appealing explanation of both endogenous and exogenous fluctuations. Previous analyses and extensions of this model have always viewed it primarily as a description of conflicts in distributive shares, and consequently have focused on ways of stabilizing its cyclic behaviour. But being a member of the D'Ancona-Volterra family of models, it has very well-known solutions. However, to our knowledge, neither Goodwin's nor the extensions have used it as a convenient backdrop for studying the impact of 'orbital instability' on economic fluctuations. This characteristic of the model may just be the channel through which exogenous shocks come to generate aperiodic looking trajectories.[3]

Orbital instability, rather than being a weakness to be removed, is more properly seen as a consequence of exogenous shocks. Thus attempts to eliminate it by subtle extensions are misleading (for without a change in structure, it cannot be removed[4]) and blurring as well. But in the meantime, because this

[2]Typically one searches bizarre looking series for low dimensionality, positivity of Lyapunov coefficients, etc. Or when appropriate, one hump maps are examined for the Feigenbaum cascade or non-degenerate period-3 steady states.

[3]D'Ancona-Volterra models are extensively studied in ecology and in the differential equations literature (Braum *et al.*, 1983; Hirsch and Smale, 1974; Boyce and Diprima, 1986). Goodwin's is a first application of such models to economics. It was subsequently taken up in other studies of economic growth (Gandolfo, 1980; Skott, 1989; Beavis and Dobb, 1990) and it has given rise to many extensions (Shah and Desai, 1981; Van der Ploeg, 1983, just to name a few). However, few of the economic applications discuss the stability problem in detail. For example, in Shah and Desai, it is an induced rate of technical changes, while for Skott, it is direct feedback that would insure stability. But neither study examines the type and causes of the supposed instability.

[4]As will be demonstrated below, this type of instability hinges more on the values of the parameters rather than on the nature of the equilibrium point.

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particular property of the model has not been fully investigated, its potential for shedding light on the debate has not been recognized and exploited. The main goal of this paper is to correct this oversight before further assessments.

Within Part I, we take up the main features of the model so as to facilitate subsequent discussions. In Part II, we highlight its main properties and show why it can generate exotic looking trajectories, without however relying on bifurcations or on the existence of expectations coordination problems. In Part III, we proceed to estimate the parameters of the model from Belgian time series data. The results show that despite its simplicity and bareness, it yields values that are within the *observable* range. With the same parameters, however, it cannot accommodate frequencies of oscillations often referred to in the real business cycle literature.

I. The Model

The model is schematic but it is built on tightly reasoned economics. Succinctly, it posits that output (Y) is produced with capital (K) and labor (L), both homogeneous and non-specific. The capital-output ratio, $k\,(=K/Y)$, is assumed constant, while output per lunit labor, $y(=Y/L)$, and the active labor force (N) grow at constant rates α and ρ, respectively. All wages are consumed, and all profits are reinvested. As the depreciation rate is zero, consumption $C = wL$, and investment $I = \dot{Y} = \dot{K} = rY$, where w is the real wage rate, r is the rental rate of capital and the dot refers to differentiation with respect to time.

With these definitions, the model arises out of three sets of equations. Namely,

Assumed relationships

$$y(t) = y(0)\exp[\alpha t],\ y(0) > 0,\ \alpha > 0 \tag{1a}$$

$$N(t) = N(0)\exp[\rho t],\ N(0) > 0,\ \rho > 0 \tag{1b}$$

$$Y(t) \equiv C(t) + I(t); \tag{1c}$$

Ancillary relationships

$$e(t) = L(t)/N(t) \tag{1d}$$

$$C(t) = w(t)L(t) \tag{1e}$$

$$\dot{L}(t)/L(t) = \dot{Y}(t)/Y(t) - \dot{y}(t)/y(t); \tag{1f}$$

Basic equations (t dropped for clarity):

$$\dot{e}/e = \dot{L}/L - \dot{N}/N \tag{1g}$$

$$\dot{s}/s = \dot{w}/w - \dot{y}/y \tag{1h}$$

$$I = rY = rK = \dot{Y} = \dot{K} = (1-s)Y \tag{1i}$$

$$\dot{w}/w = -w_0 + b_1 e \tag{1j}$$

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$$w/y + (1-s) \equiv 1 \tag{1k}$$

Appendix 1 shows how these relations are used to arrive at the model:

$$\dot{e} = (a_0 - a_1 s)e$$
$$\dot{s} = (-b_0 + b_1 e)s, \tag{2}$$

where $a_0 = (1/k - \alpha - \rho) > 0$, $a_1 = 1/k > 0$, $b_0 = (w_0 + \alpha) > 0$ and $b_1 > 0$.

According to (2), the employment ratio (e) and labor's share (s) are cyclical if there exists a positive relationship between the growth of real wages and the employment ratio of the form of (1j), where w_0 and b_1 are positive constants. This assumed relationship, being the coupling mechanism, is the only one needed from the labor market and it is crucial for the working of the model. Happily also it has been upheld in a number of influential empirical studies (Modigliani, 1977; Bils, 1985; Keane, 1988).

As shown, the set of assumptions needed to describe the conflict between employment and distributive shares reduces to the mere supposition that the core of the economic system behaves as if s preys on e. The evolution of these two variables is then described by the pair of differential equations shown in (2), whose economic interpretation is as follows: If the system was uncoupled, the respective growth rates of employment and labor's share would have been a_0 and $-b_0$. But given (1j) and the signs of a_1 and b_1, employment growth is depressed by labor's share, whereas that of share is enhanced by the growth of employment. Further, for nonnegative equilibrium values, $e^*, s^* \in [0, 1]$, $a_1 \geq a_0$ and $b_1 \geq b_0$.

As a consequence, it follows that: a high profit rate (r) leads to high growth in employment and output and eventually to increases in real wages. Higher wages in turn squeeze profits and lower employment and output. Profits are thus restored, and a new cycle begins. This, we believe, is a fair summary of the main features of the model. The reader can refer to the original source for more detail, but for now the task at hand is to highlight the properties of this simple construct.

II A Theoretical Assessment

For now and subsequent reference, the dynamical system (2) is first compactly written as $\mathbf{P} = G(\mathbf{P}), p \in \mathbf{P} \subset \mathbb{R}^2$, with solutions $\psi(t, p)$ for all $p \in \mathbf{P}$. For clarity and economy of space, we first define some basic concepts:

Definition 1 (D1): An orbit, Γ, is a description of the way a $\psi(t, p)$ evolves in state space as t runs forward;

Definition 2 (D2): $\psi(t_n, p_0)$ is an ω-limit point of $p \in \mathbf{P}$ if there is a sequence it $\{t_n, p_0\}_1^\infty$ such that $\lim_{n \to \infty} \psi(t_n, p) = \psi(t_n, p_0)$ (resp. α-limit point if t runs backward to $-\infty$);

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Definition 4. (D4): Given D1-D3, when $\alpha(\Gamma) = \omega(\Gamma), \forall p \in \mathbf{P}$, then Γ is either a point orbit or a closed trajectory.

For $e, s \geq 0$, the general solution of system (2) shows equilibria at (0, 0) and $(a_0/a_1, b_0/b_1)$. The system also has particular solutions for $(e > 0, s = 0)$ and for $(e = 0, s > 0)$. From the above definitions, it follows:

$$\Gamma_1 \Rightarrow \begin{cases} e(t) = e_0 \exp[a_0 t] \\ s(t) = 0 \end{cases} \tag{3a}$$

$$\Gamma_2 \Rightarrow \begin{cases} e(t) = 0 \\ s(t) = s_0 \exp[-b_0 t] \end{cases} \tag{3b}$$

$$\Gamma_0 \Rightarrow \begin{cases} e(t) = 0 \\ s(t) = 0 \end{cases} \tag{3c}$$

$$\Gamma_* \Rightarrow \begin{cases} e(t) > 0 \\ s(t) > 0 \end{cases} \tag{3d}$$

These orbits are either point orbits (critical points), closed curves, or they are positively asympotic to a point orbit or to a closed curve.

Before attempting to uncover their exact nature, however, it would help to first observe that because $e, s \in [0, 1]$, with s on the vertical axis and e on the horizontal, the points: (0, 0), (1, 0), (1, 1) and (0, 1) form a region M, which is positively invariant. As a consequence thereof, every orbit at the boundary of M either enters M or remains part of the boundary. As shown in Figure 1 below, near (1, 0), $\dot{e} > 0, \dot{s} > 0$; near (1, 1), $\dot{e} < 0, \dot{s} > 0$; near (0, 1), $\dot{e} < 0, \dot{s} < 0$. These three points can be ruled out of consideration, leaving Γ_0 and Γ_*. Γ_* being of greatest interest, we begin with it.

As Γ_* may be a point orbit or a closed trajectory, we begin by solving system (2), neglecting the time parameterization of Γ_*. Dividing the second equation by the first and integrating, we get:

$$a_0 \ln s + b_0 \ln e - a_1 s - b_1 e = \mathcal{L}, \tag{4}$$

where $\mathcal{L}$ is a constant of integration[5]. This expression happens to be a Lyapunov function, *i.e.* $V(e, s) = \mathcal{L}$. Therefore,

$$\dot{V}(\cdot) = (\partial V(\cdot)/\partial e)\dot{e} + (\partial V(\cdot)/\partial s)\dot{s}$$

$$= (b_0/e^* - b_1)e^*(a_0 - a_1 s^*) + (a_0/s^* - a_1)s^*(-b_0 + b_1 e^*) \tag{5}$$

[5] As will be shown below, the linear approximation of (2) indicates that Γ_* is a stable center. However, at this point it is not known how the nonlinear term may deform the center. Normally, the Bendixon negative criterion would be used to test for the absence of cycle. But by positing $f = e(a_0 - a_1 s)$ and $h = s(-b_0 + b_1)$, the divergence of the vector field:

$$\partial f/\partial e + \partial h/\partial s = (a_0 - a_1 s) + (-b_0 + b_1 e)$$

cannot be assessed for signs until the empirical values of the parameters are known.

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$$= 0,$$

using (4) and (2). It can then be concluded that the center shown by the lin approximation is not deformed and that Γ_* is indeed a closed curve. Th (3a)–(3d) may now be described as follows:

$$\omega(\Gamma_1) = (0, 1), \quad \alpha(\Gamma_1) = (0, 0)$$
$$\omega(\Gamma_2) = (0, 0), \quad \alpha(\Gamma_2) = (0, 1)$$
$$\omega(\Gamma_0) = (0, 0), \quad \alpha(\Gamma_0) = \omega(\Gamma_2) = \alpha(\Gamma_1)$$
$$\omega(\Gamma_*) = \alpha(\Gamma_*)$$

Accordingly, Γ_0 is an unstable point orbit, *i.e.* a saddle with Γ_2 as its inset and as its outset by (6c); this expression also shows that the direction of the flow counterclockwise. And as already shown by (5) and D4, Γ_* in (6d) is a closed cur

It is also known by (5) that trajectories in M do not converge to Γ_* as $t \Rightarrow$ or $t \Rightarrow -\infty$; hence Γ_* is not a limit cycle. Further investigation is required at this point, for it is well-known that a closed curve which is not a limit cycle certainly not an isolated trajectory either.

Let us then reconsider (4). Taking exponentials of both sides gives:

$$(e^{b_0} \cdot s^{a_0})/\exp[b_1 e + a_1 s] = \hat{f}(e) \cdot \hat{h}(s)$$
$$= \exp[\mathcal{L}] = F,$$

where $\hat{f}(e) = e^{b_0}/\exp[b_1 e]$, $\hat{h}(s) = s^{a_0}/\exp[a_1 s]$, and F is a constant. $e, s \in [0, 1]$, $\hat{f}(0) = 0$, $\hat{f}(1) = 1/\exp[b_1]$, $h(0) = 0$, $\hat{h}(1) = 1/\exp[a_1]$. Then for $0 \le e \le 1$ and $0 \le s \le 1 : 0 \le F \le 1/\exp[b_1 + a_1]$, passing through a maxim ($F_{\max}$) at $e^* = b_0/b_1$, $s^* = a_0/a_1$. what this means is that every $0 \le e \le b_0/b_1$ $0 \le s \le a_0/a_1$ yield a different constant of integration $\mathcal{L}$ (or F), and hence unique Γ_*. It may then be concluded that the region of M bounded $[0, F_{\max}]$ is filled with non-constant orbits like Γ_* that there are no orbits at beyond $F_{\max} = p_0$; and that p_0 is the center of rotation of all Γ_*'s. Moreover, a consequence of the Uniqueness Theorem, orbits cannot intersect; and giv the fact that the boundaries of M are also orbits, it follows that if an orbit en M through its boundaries, it can never leave.

For a quantitative appreciation of the cyclic variation of e and s about p_0 now look at the linear approximation, written as

$$\begin{pmatrix} \dot{e} \\ \dot{s} \end{pmatrix} = \begin{pmatrix} a_0 - a_1 s^* & -a_1 e^* \\ b_1 s^* & -b_0 + b_1 e^* \end{pmatrix} \begin{pmatrix} e - e^* \\ s - s^* \end{pmatrix}$$

on the grounds that it is permissible to do so when perturbations about p_0 small, and that the p_0 remains the center of the nonlinear system. Letting Tr

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det (J) and λ_1 ($i = 1, 2$) stand for the trace, determinant and eigenvalue of the Jacobian matrix J, it follows from (8):

$$\left.\begin{array}{l} \text{Tr}\,(J) \neq 0 \\ \det(J) < 0 \\ [(\text{Tr}\,(J)^2 - 4\det(J)]^2 > 0 \end{array}\right\} \text{for } e^* = 0, s^* = 0$$

$$\left.\begin{array}{l} \text{Tr}(J) = 0 \\ \det(J) = (a_0 b_0) > 0 \\ \lambda_1 \pm (a_0 b_0)^{1/2} \\ \text{Re}(\lambda_1) = 0 \end{array}\right\} \text{at } \psi(t_\infty, p_0);$$

As before Γ_0 is a saddle and $p_0(e^*, s^*)$ is a center. The solutions also show that employment oscillates about the average value b_0/b_1 as a cosine function with amplitude Ub_0/b_1. Labor's share oscillates about a_0/a_1 as a sine function with amplitude $U(a_0b_0)^{1/2}/a_1$. The orbital velocity is $(a_0b_0)^{1/2}$, but labor's share lags employment by a phase angle ϕ. Both the constants U and ϕ are determined by initial conditions.

The general properties of the model can now be summarized as follows:

P1: System (2) possesses a point orbit p_0 for $e, s \in (0, 1]$, surrounded by numerous non-constant, non-intersecting closed trajectories (Γ_*), flowing counterclockwise;

P2: The location of $p_0(= (b_0/b_1)^{b_0}(a_0/a_1)^{a_0} \exp[-(a_0 + b_0)]$ is determined by the parameters of the model;

P3: Amplitudes and periods of non-constant orbits in M depend on the parameters of the model and on the state of the system at the beginning of economic time.

It follows from P1–P3 that:

(i) The period near p_0 is $2\pi/(a_0b_0)^{1/2}$, but grows monotonically with the distance from p_0;

(ii) for any initial conditions $e(0)$, $s(0)$, there is a unique non-intersecting orbit Γ_* passing through $e(0)$, $s(0)$. Hence the equilibrium point wanders from orbit to orbit as a result of changes in initial conditions and/or parameter shocks, no matter how small. This means that system (2) lacks orbital stability.[6]

Other Implications

It should be reemphasized at this point that the present analysis differs markedly from the task of building a state-dependent model or probing the data for random determinism. The objective of Goodwin was to build a nonlinear

[6]The notion of orbital stability was first discussed in Newman (1954). However, for the more recent work on non-isolated and therefore unstable orbits in quadratic models, see Van der Vaart (1978).

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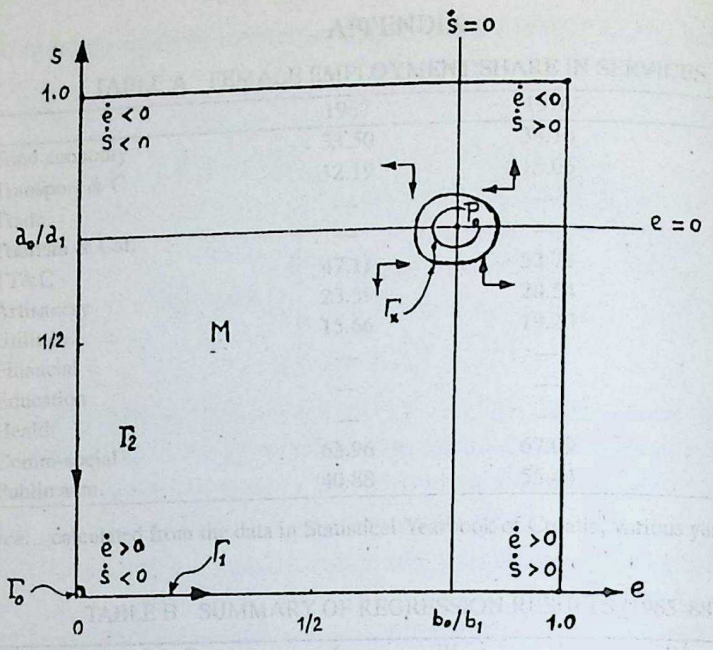

FIG. 1 PHASE PORTRAIT OF SYSTEM (2)

model based on plausible purposive economic behaviour. Our task is to bring out some of its heretofore unknown properties and see if it can account for the empirical regularities of macroeconomic time series data. However, in the original model, Goodwin assumes constant parameters. But as shown by the data (see Appendix 2), no such constancy is observed. We, therefore, propose to circumvent this problem by adopting the bold position that in nature systems are observed at or near their equilibrium. Thus the non-constancy of the parameters is simply seen as resulting from incessant perturbations. Observe for that matter that at steady state, Y and K grow at the same rate r (see 1i); L and N grow at rate ρ (1b, 1g); y and w grow at rate α (1a, 1h), and so on. The observed variation of k and the discrepancy in growth rates are attributable to perturbations, affecting the parameters over the interval t_0 and $t_0 + \tau$. Given P1–P3, this means that the location of p_0 in M, the frequency (period) and amplitudes of oscillations are constantly changing. This also means that the time paths of the variables, though cyclic, are not regular and symmetric.

In addition, the true value of a model must depend on how well it captures existing underlying relationships, and the model's solutions must reflect the interplay of these relationships. For example, if the growth rate of real wages were a constant, the present model would only be partially coupled; as a consequence, s would always be falling and employment always rising. On the other hand, given the necessary restrictions on the parameters, a negative correlation between the growth rate of N and e would change the nature of the equilibrium from a center to an unstable spiral. A positive correlation between

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the growth rate of y and s, and between the growth rate of N and e would reduce to logistic growth for both e and s, leading to a stable spiral rather than a center. However, these relationships are not observed. And the point we want to stress is that no convenient relationships and restrictions should be imposed on the model so as to get desired results as some of the extensions seem to suggest; the task of the scientist is to represent nature as it is. In that connection, it is precisely from shying away from *ad hoc* assumptions and restrictions that the schematic Goodwin's model draws its merit.

However, it must also be pointed out that the mere presence of cyclical patterns cannot in itself be the only indication of the model's power to explain. We would, in addition, expect employment and profits, as well as labor's share and unemployment to be in phase. We will return to this point immediately after drawing out other implications that may well turn out to be useful for long term policy formulation. Namely:

(iii) For given growth rates of output per head and population, wage structure and initial conditions, the higher the capital-output ratio, the lower is the amplitude of oscillation of s and the lower is s^*.

(iv) The higher the labor productivity, all else equal, the higher is e^*; the lower is s^* and the higher is the amplitude of e, for a given set of initial conditions

(v) The higher the growth rate of the labor force, all else equal, the lower is s^*, the longer the period, and the lower is the amplitude of s, for a given set of initial conditions.

(vi) A flat (steep) wage growth function is consistent with longer (shorter) period lengths and lower (higher) amplitude for s, for a given set of initial conditions.

(vii) All solutions $e(t) > 0$, $s(t) > 0$ ($e(0) > 0$, $s(0) > 0$) are periodic, and $s(t)$ lags $e(t)$ by a quarter of a period. If a recession is characterized by low output, low profits and low employment, it is brought about by high real wages. So workers' consumption, output, employment and real wages move together. Put differently, consumption, employment and real wages are procyclical.

Clearly, this simple model has many interesting features, but has also many limitations. For example, the all important distinction between physical and human capital is not made. Further, as the neoclassical wisdom would have it, when K is relatively low, the return on capital is relatively high. If the economy is open, how exactly the consequent capital inflow would affect labor productivity and the rates of increase of K and Y? This simple nonlinear sketch cannot provide a definitive answer to this question. In that connection, however, it simply predicts that shocks of this nature, which increase both k and α, are *caeteris paribus* employment creating and labor impoverishing. In all, as they now stant, some of the implications of the model are consistent with, while others seem to contradict the conclusions of high level extant theories. We now ask: How would such a simple construct fare when confronted with data? The next section will attempt to provide an answer.

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III. The Data and Results

For a schematic model such as this one to be taken half way seriously, it must conform to values actually documented in real economies. Luckily, its data demand is modest enough to encourage a quantitative assessment at this juncture.

What is needed here are values for the average growth rates of output per head and the labor force, the aggregate capital-output ratio, and an estimate of the relationship between the growth rate of real wages and the employment ratio. The model also makes definite predictions about phase angles. It would be necessary to compute the appropriate series. The main source of the data used for this is the MARIBEL Data Bank, constructed by the Belgian Planning Office. This data set was also used by Sneessens and Dreze in a two-market macroeconomic disequilibrium model of the Belgian economy to compute two of the needed series, *i.e.* the adjusted share of labor and the profit rate. In order to confront the predictive power of the two models, we compare their values with ours. Hence, unless otherwise indicated, all pertinent values are computed from the MARIBEL Data Bank, which appears in a Supplement on Unemployment, published by *Economica* (vol. 53, 1986) (hereafter: *Econsup*).

The Belgian series is one of the most complete but, as for the other countries, the figures are given in log forms. So we calculate our values according to the following relationships:

$$\ln (K/Y) = \ln (K/N) + \ln (N) - \ln (Y)$$

$$\ln (Y/L) = \ln (Y) - \ln (L)$$

$$\ln (w/p_c) = \ln (w_n) - \ln (p_c)$$

where K is the aggregate capital stock, excluding dwellings (in billions 1975 Bfr); Y is GDP at factor cost (in billions 1975 Bfr); N is the labor force (employment and unemployment in the private sector (in millions of workers); L is total employment in the private sector (in millions); w_n is the net wage per employee in the private sector (in thousands Bfr per year) and p_c is the private consumption price index (1975 = 100).

As shown in Appendix 2, no value remains constant from year to year; so values averaged over the entire 1953–82 period are used. For example, the capital-output ratio varies from 1.14 in 1953 to 1.72 in 1982, averaging 1.43. In addition to its variability, the figure for capital stock under-estimates the true value due to the exclusion of dwellings of all sorts. To gain an idea of what the difference might be, we calculate the average capital-output ratio for Austria, using the same above described procedure. For the shorter period covered (1970–84) by the Austrian data, we find a value of 4.31.[7] As we could not reconcile such a difference, our calculations reflect both the low and high values of k. Appendix 2 also shows the average values used for α and ρ, as well as the

[7]The principal source of the Austrian data is IHS-Datenbank, quoted in *Econsup* (pp. s335–s336).

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TABLE 1[1]

Parameters	Tr(J)[2]	det(J)	λ, λ[3]	ω[4]	T[5]
$a_0 = .1913$ $a_1 = .2300$ $b_0 = -.355$ $b_1 = .3709$	0	.0679	± .26061	.2606	24.1
$a_0 = .6596$ $a_1 = .6983$ $b_1 = -.355$ $b_1 = .371$	0	.229	± .4791	.479	13.1

[1]According to the linear part of system (2)

[2]J is the Jacobian matrix

[3]eigenvalues

[4]orbital velocity in radians per year

[5]period near the point orbit P in years

data used to estimate the bivariate relationship postulated in (1j) above. More specifically, the wage-employment equation is estimated as:

$$\dot{w}/w = \underset{(3.63)}{-.321} + \underset{(3.96)}{.371}e$$

$$r = \underset{(3.95)}{.606}, \text{d.w.} = 1.954,$$

with t values in parentheses.[8] Thus, for $\alpha = .0348$, $\rho = .00451$ and $w_0 = -.321$, the broad characteristics of system (2), calculated for two different values of k, are given in Table 1, and the overall results appear in Table 2.

TABLE 2

K/Y	Employment ratio e^*		Labor's share $s^{*\prime}$		Investment ratio $(I/Y)^*$		Profit rate r^*		Real wages growth rate g_w^*	
	Predicted	Actual	Predicted	Actual	Predicted	Actual	Predicted	Actual	Predicted	Actual
1.43	.95		.94		.060		.042		.034	
		.94[1]		.74[2]		.19[3]		.29[4]		.027 .046[5]
4.31	.95		.83		.168		.038		.034	

[1]Calculated from the MARIBEL Data Bank in *Econsup*: S337–S341

[2]Averaged over 1961–62 supplied by Sneessens and Drèze in *Econsup*: S93

[3]Averaged over 1975–83 from OECD National Accounts (1984) supplied by Sneessens and Drèze in *Econsup*: S90

[4]Averaged over 1954–82, calculated by Sneessens and Drèze in *Econsup*: S100

[5]Averaged over 1971–80 from European Economy (1984), supplied by Sneesens and Drèze in *Econsup*: S94

[8]In all cases, the Null hypothesis is rejected at the 1% level of significance.

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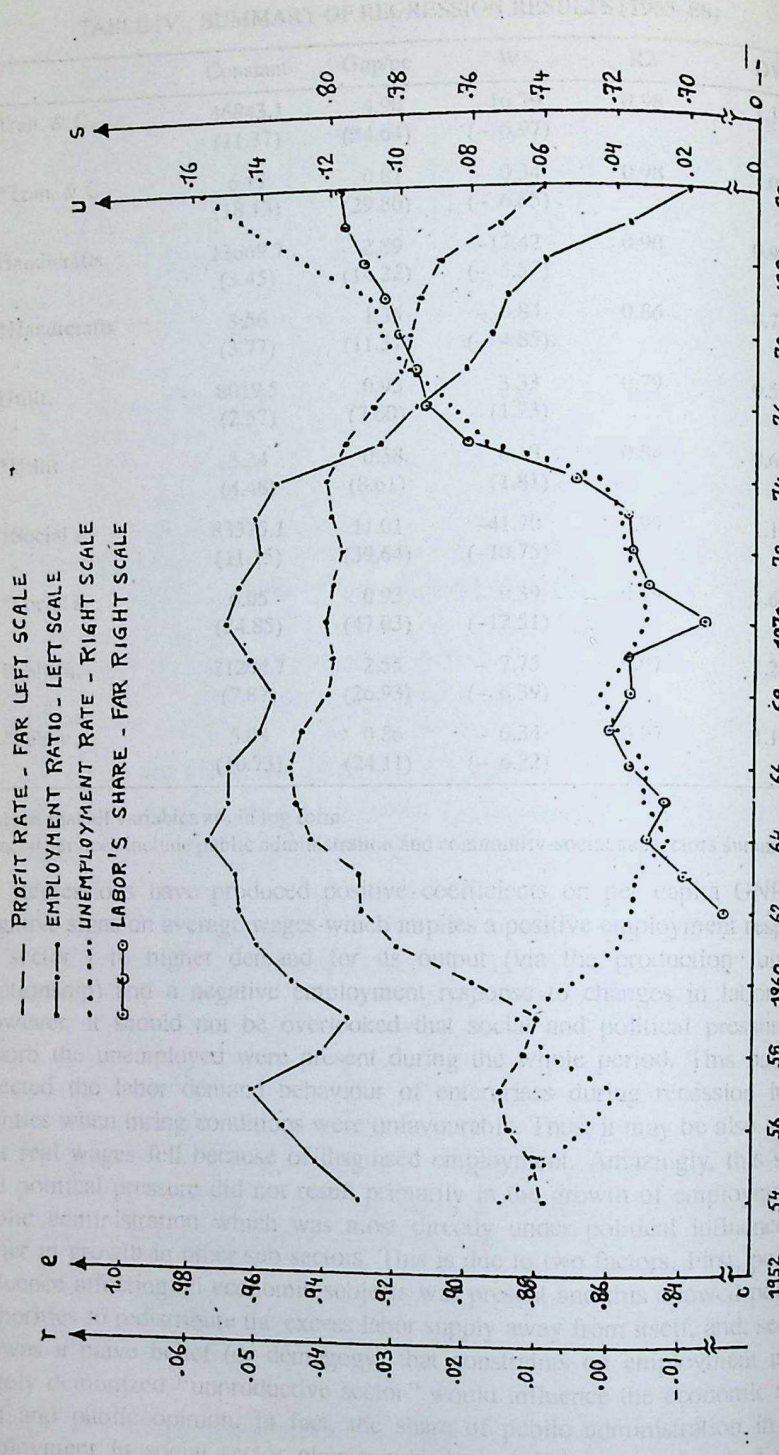

FIG. 2

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As it can be seen, the predicted average values of labor's share and the investment ratio differ markedly from actual values for the lower k although they are much closer for the higher value. But considering that the true value of the aggregate capital-output ratio for Belgium is somewhere in between, and that most actual values are documented over much shorter periods, the overall results are quite satisfactory. Moreover, although the model predicts a wandering point p_0 in M and hence irregular time paths, as pointed out above, it is unlikely that share (s) would systematically lag the employment ratio (e), or the employment and profit rate (e, r) as well as share and unemployment (s, u) would be in phase as predicted by the model. But this is what is found in the data and shown in Figure 2.

Summary and Conclusions

In general, economic dynamics is approached on the assumptions of the existence of a conservative vector field and truly constant parameters as if economics was a physical system. These assumptions may in fact be wrong and if so would constitute a serious impediment to the way economics explain. Here, however, assuming that capitalist investment just replaces the energy lost through workers' consumption, the conservative principle embodied in Goodwin's growth model is accepted but the constancy assumption is challenged. Goodwin's model has also inspired a large body of works in which its orbital instability is always somehow viewed as a weakness and, to our knowledge, it has never been confronted with data. The paper addresses these issues.

We make no claim for accuracy, but from the overall results, it may be argued: the fact that such a schematic model (with no government, no adjustment costs, no rational expectations, etc.) could reproduce the actual Belgian experience so closely should lend some credence to the views of those who hypothesize the presence of nonlinearity in actual economies.

APPENDIX 1

Equation (1c) in the text is a basic identity. Substituting (1e) and (1i) in (1c) and dividing through by L and y give equation (1k). Differentiating (1k) logarithmically yields (1h). Substituting (1a) and (1j) in (1h) gives:

$$\dot{s}/s = -(w_0 + \alpha) + b_1 e \qquad \text{(i)}$$

Next, differentiating (1d) gives (1g). Substituting (1f) in (1g) and using (1a), (1b) and (1i) give:

$$\dot{e}/e = (1/k - \alpha - \rho) - s/k \qquad \text{(ii)}$$

Letting $a_0 = (1/k - \alpha - \rho) > 0$, $a_1 = 1/k > 0$, and $b_0 = (w_0 + \alpha) > 0$, we get the pair of differential equations denoted system (2) in the text.

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APPENDIX 2

Growth rates of the labor force, employment, output per head, wages and the employment ratio for the Belgian Economy 1953–82

Year	N (10^6)	$\dot{N}/N$ (%)	L (10^6)	$\dot{L}/L$ (%)	y^1 (10^3)	$\dot{y}/y$ (%)	$\dot{w}/w^2$ (%)	L/N (e)
1953	3.709		3.411		257.992			
1954	3.685	– .663	3.427	.467	267.310	3.610	2.400	.930
1955	3.668	– .462	3.456	.826	277.821	3.930	4.860	.942
1956	3.667	– .017	3.494	1.110	282.230	1.580	1.630	.952
1957	3.677	.254	3.535	1.150	284.533	.816	.890	.961
1958	3.668	– .226	3.454	–2.310	290.400	2.060	4.260	.941
1959	3.616	– 1.44	3.380	–2.140	305.610	5.230	1.370	.934
1960	3.607	– .230	3.427	1.360	317.600	3.920	3.280	.950
1961	3.612	.122	3.468	1.190	329.197	3.650	1.380	.960
1962	3.648	1.000	3.523	1.570	341.409	3.710	4.540	.965
1963	3.641	– .200	3.518	– .141	356.663	4.460	5.240	.966
1964	3.657	.433	3.566	1.360	376.237	5.480	7.000	.975
1965	3.667	.275	3.554	– .356	391.302	4.000	1.530	.969
1966	3.676	.248	3.563	.266	401.444	2.590	3.020	.969
1967	3.688	.328	3.542	– .596	419.819	4.570	3.620	.960
1968	3.699	.312	3.541	– .020	437.030	4.090	2.650	.957
1969	3.738	1.040	3.605	1.790	455.358	4.190	3.520	.964
1970	3.777	1.040	3.663	1.570	475.558	4.430	3.740	.970
1971	3.817	1.040	3.691	.784	491.336	3.310	4.630	.967
1972	3.845	.462	3.691	.003	518.093	5.440	5.760	.960
1973	3.888	1.380	3.740	1.300	543.190	4.840	3.690	.961
1974	3.956	1.720	3.786	1.210	560.644	3.210	2.840	.956
1975	3.989	.815	3.690	–2.570	563.460	.502	.690	.925
1976	4.025	.911	3.684	–1.480	596.325	5.830	6.190	.915
1977	4.059	.851	3.660	– .639	604.461	1.360	– .510	.901
1978	4.087	.685	3.565	– .124	625.060	3.400	– .085	.894
1979	4.152	1.570	3.697	1.120	632.220	1.140	1.660	.890
1980	4.179	.642	3.680	– .467	657.847	4.050	3.120	.880
1981	4.189	.248	3.590	–2.490	668.305	1.580	– .010	.857
1982	4.230	.967	3.556	– .938	682.690	2.150	–4.540	.840
Average		.451		.143		3.418	2.700	.937

[1]GDP at factor cost (1975 billions Bfr) divided by total employment (in millions) excluding the partially unemployed and the unemployed from the public sector.

[2]Net wage per employee in the private sector deflated by private consumption price index (1975 = 100).

Source: Calculated from the Maribel Data Bank constructed by the Belgian Planning Office, published in *Economica*, vol. 53, No 210(S), 1986, pp. 5337–5341.

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GROWTH OF SERVICE SECTOR EMPLOYMENT IN CROATIA[1]

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I. Introduction

The development of a country is commonly accompanied by the growth of service sector employment which may take various forms. The actual form depends on many factors but most importantly on its development level and economic structure.

A number of studies have shown a few more or less general characteristics of service sector employment in developed countries. As they represent a good path for analysis we will just mention them before turning to our case study—Croatia. The aim of this paper is to test the development path from developed countries experience on Croatian data. The point may be summarized as follows:

1. Developed countries have experienced a rapid expansion of service sector employment and it has become the sector with the largest share in overall employment. This expansion was accompanied either by an increase in secondary sector employment or a decrease.

2. Past experience has shown that, in order to be analyzed properly, services should be divided into few sub-sectors because they differ so much that the aggregate analysis would not tell us a lot. As there is no such thing as a universal division of services different authors divide services into different sub-sectors, and frequently present innovative typologies of service sub-sectors because their division of services suits best their research results and their theory about services. This seems to be the main reason why economists have produced so many different service sub-sectors in literature.

In this paper probably the most common typology of services will be used, that of Browning and Singelmann. It includes four categories of services: distributive, producer, social and personal. Besides, all statistical data will be presented in a way in which they are available from official Croatian statistics.

3. Developed economies have experienced the process of externalization

[1]Croatia is one of the six Yugoslav republics, which we may consider as moderately developed because its GNP per capita is about thirty per cent higher than the Yugoslav average (in 1988 it was approximately $3400 what was above the average per capita income of upper-middle-income countries). Croatian population totals about 4,500,000 of which about 1,95,000 were economically active in 1988. Some important economic tendencies in Croatia are reported in Charts A and B in Appendix.

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which led to a rapid growth of producer services, such as finance, banking, insurance and business services in particular. Social services employment has also grown rapidly although not so fast as in producer services. Distributive services have grown more slowly with a slight decline in some cases. Personal services employment differs from one country to another.

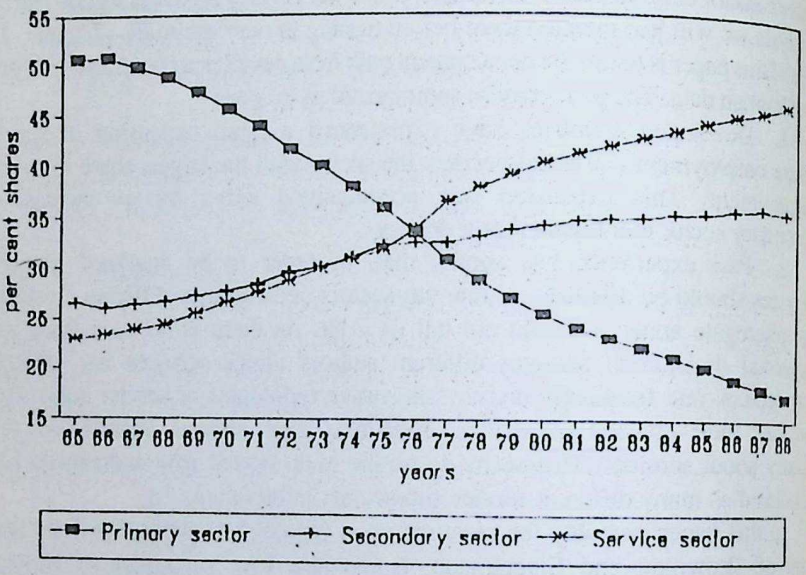
4. Employment growth in the service sector was, in general, dominated by females.

5. Finally, not only did employment in service industries grow in the past but so did what we may consider as service-type occupations in the entire economy.

II. Total Employment in the Service[2] Sector

The process of sectoral employment transformation is illustrated in Chart I.

CHART I SECTORAL EMPLOYMENT SHARES IN CROATIA



The change in sectoral employment shares was remarkable and fast. In only 24 years the primary and service sectors have practically and completely inverted their positions. The share of primary sector employment has fallen by more than 33 per cent while, at the same time, the service sector has gained more than 23 per cent of the share in total employment and, thus, doubled its starting share. It has not, however, reached the 50 per cent of total employment so far (47 per cent in 1988)[3]

[2]We use so called residual definition of services, i.e. in service sector we include all industries that are not agriculture, forestry, hunting and fishing (primary sector), manufacturing, mining or construction (secondary sector).

[3]It should be mentioned that it is likely that the service sector has already reached more than

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The secondary sector also grew, both in terms of the absolute number of employees and of its share, but at a more moderate rate. Thus, the processes of both industrialization and tertiarization were present during the whole period. It is only last year that the share of secondary sector employment fell for the first time, which may signal the beginning of the deindustrialization process in terms of employment behaviour. If this turns out to be true, the "turning point" in Croatia, or the values from which the service sector share begins to expand at the expense of the industrial sector share, is 46 per cent and 36 per cent for the two sectors, respectively. For the sake of comparison, using a sample of 30 countries selected to give roughly equal numbers of developed and less developed countries Gemmell (1986) has identified the "turning point" values to be about 37 per cent for the service sector and 34 per cent for the industrial sector.

Two more comparative features appear to be very interesting. First, the speed of sectoral changes in employment in Croatia was higher than it was before or at the same time in high income countries. According to Rowthorn and Wells (1987), in the 25 year period from 1955 to 1979 the increase of service employment share in OECD countries was from +21.2% in Austria (1956–1979) to +11.9% in Great Britain, other countries being within this range[4]; according to Fontaine (1987) in the period from 1960 to 1984 the rise of this share in OECD countries was from +11% to +21%[5]. In Croatia this rise amounted to 23.7% in 1965–1988 period.

TABLE I SECONDARY SECTOR EMPLOYMENT SHARE

	1965	1980
Bulgaria	31	45
Czechoslovakia	47	49
East Germany	49	50
Hungary	40	44
Poland	32	39
Croatia	26.5	34

Source: World Development Report 1988, p. 238, and own calculations for Croatia from Vujčić (1991).

Second, the share of secondary sector employment was never so high as in other socialist economies where this sector was forcibly promoted by the state

50% of the total employment share.This could be explained by the fact that the "unofficial (second) economy" is not reported and that most "second economy" jobs are service type.

[4]For example, Germany has experienced the growth from 36.7% to 49.8%, Japan from 37.3% to 53.9%, Italy from 30.0% to 47.4%, in USA from 52.7% to 65.2%, etc.

[5]In Germany it had risen from 40% to 54%, in Japan from 41% to 56%, in Italy from 44% to 65%, in USA from 58% to 69%, etc., and UNCTAD (1988) states that "among the 10 lowest ranking OECD countries, the average share rose from below 40 per cent to over 55 per cent."

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economic policy. Table I shows the employment share of the secondary sector in East European countries and Croatia for two years, 1965 and 1980.

Turning back to services it is, of course, possible to test some theoretical explanations about service sector employment behaviour, i.e., about some factors contributing to the growth of the service sector.

On the demand side the most common explanation for growth of services employment is that services are highly income elastic in the sense of "Engel's Law", i.e., that the demand for service sector rises faster than the rise of GNP/pc and that this demand, via the production function, causes demand for labor in services. Subsequently, higher per capita income will result in more service sector employment.

On the supply side four main sources of labor force for service sector employment growth are: (1) population growth; (2) activation of non-active population, which generally implies activation of females whose labor force participation rates are much lower than those of men; (3) immigration; and (4) transfer of labor force from other sectors.

The first and third sources were not important in Croatia. Population growth was lower than in both middle and high income countries on the average, and it was constantly falling. For the whole period the rate of population growth was 0.39% per year while for the last six years 1983–88 it was only 0.19%, barely sufficient for simple reproduction. From the migration point of view Croatia was a net labor force exporter. It was usually argued that the transfer of labor force from other sectors to services was the main source on the supply side.

We have tested the model of the following form:

$$\text{EMPSERV} = f(\text{GNP/pc}^6, \text{EMPPRIM}, \text{LFPRF}) \qquad (1.1)$$

where EMPSERV is employment in the service sector, EMPPRIM employment in the primary sector, and LFPRF the labor force participation rate of females with a priori expected positive signs of per capita income and labor force participation rate of females (the latter, in fact, represents the activation of those women who were previously non-active) and negative parameter sign of EMPPRIM variable.

Regressions on equation (1.1) suggested that a double-log form of equation is preferred on the basis of improved Durbin-Watson statistics.

$$\ln \text{EMPTERC} = \underset{(11.8417)}{7.8765} + \underset{}{0.6186 \ln \text{GNP/pc}} - \underset{(-5.6608)}{0.3152 \ln \text{EMPPRIM}} + \underset{(8.0818)}{2.055 \ln \text{LFPRF}} \qquad (1.2)$$

$$R^2 = 0.9984, \quad DW = 1.564$$

The equation is satisfactory in respect of both parameter stability properties and autocorrelation. The variation of the dependent variable explained by the

[6]Due to different social account system I have used 'Društveni proizvod' (social product) as a good substitute for GNP.

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equation is very high, more than 99%, and all parameter estimates are of a priori expected sign. A little surprising is the higher t-value associated with the labor force participation rate of females as compared with primary sector employment, indicating that the former was the main source of labor force for the service sector. Table A in Appendix shows an increase of female employment share in all service sub-sectors proving the hypothesis that service sector employment growth is dominated by females.

III. Employment in Service Sub-sectors

As argued before, the service sector cannot be understood properly without analysing its sub-sectors. Table II shows the average annual growth rates of employment in seven service sub-sectors[7] (as reported by official statistics) and two sub-periods, 1965–1976 and 1977–1988.

TABLE II AVERAGE ANNUAL GROWTH RATES OF EMPLOYMENT IN SERVICE SUB-SECTORS OF SOCIAL SECTOR[8]

	65–88	65–76	77–88
Total economy	2.30	2.05	2.29
Transport & communications	2.07	2.05	1.33
Tourism, trade & catering	4.15	5.60	2.77
Handicrafts	–1.12	1.13	3.58
Utilities	2.14	4.89	0.70
Comm.-soc.	3.00	2.90	2.96
Public adm.	2.11	2.59	2.39
Financial s.	n.a.	n.a.	5.74

Source: Calculated from data in *Statistical Yearbook of Croatia*, various years.

Employment fell only in handicrafts, while in all the other sub-sectors it increased. The most rapid growth of employment may be observed in producer services (finance, banking, insurance and other business services) which is a consequence of the above mentioned process of externalization of services and is in line with the tendencies observed in developed countries. This sub-sector was statistically registered only in the second sub-period.

For the whole period the most rapid rise in employment was recorded in tourism, trade and catering, an unsatisfactory statistical mixture of personal (tourism and catering) and distributive (trade) services.

However, if we divide services in accordance with Browning and Singlemann typology[9] one should note the following: (1) employment in

[7] The water supply sub-sector is not reported because of its minor importance in terms of employment.

[8] Here the word social refers to the type of ownership, i.e., socially owned sector of economy. About 90 per cent of all firms in Croatia are socially owned.

[9] We have not included construction into service sector, but if construction is regarded as a

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producer services is rising very rapidly which is particularly important because they provide high-skilled jobs and, thus, their rise improves the quality of the service sector as a whole; (2) all distributive services (transport & communications and trade) also rise rapidly but at lower speed than producer services; (3) social services employment (health, education and public administration) increased faster than in transport and communications but not as fast as in trade; and, finally, (4) employment in personal services behaved very differently: in capital-intensive personal services like hotels and restaurants it rose very quickly, while individually organised services (handicrafts) were the only sub-sector with diminishing employment. One possible reason for this is a very strong cost disease in handicrafts. The difference between community-social services which are also of the cost disease kind but have experienced a relatively fast growth of employment, and handicrafts, is that the latter are more likely to become bankrupt because they are more oriented to individual consumers and have no state to look after them.

A somewhat different situation appears if we look at growth rates of sub-sector shares in total employment of the social sector. Table III shows them for the whole analyzed period and two sub-periods.

TABLE III AVERAGE ANNUAL GROWTH RATES OF SERVICE SUB-SECTOR SHARES IN TOTAL EMPLOYMENT OF SOCIAL SECTOR

	65–88	65–76	77–88
Transport & communications	–0.43	0.00	–0.88
Tourism, trade & catering	5.40	4.83	0.80
Handicrafts	–3.54	–0.62	0.38
Utilities	–0.08	0.76	–0.39
Comm-soc.	1.85	1.05	0.89
Public adm.	–0.18	0.26	0.05
Financial s.	n.a.	r.a.	1.33

Source: Calculated from data in Statistical Yearbook of Croatia, various years.

The share has increased only in two sub-sectors (and in financial services but only for a period when they first appeared in official statistics). Tourism, trade and catering accounted for almost 24 per cent of total employment growth in the social sector from 1965 to 1988. This feature is largely a consequence of the orientation to tourism. As tourism developed rapidly the other two sub-sectors, trade and catering, that "service" it, also expanded at high rates.

service activity (and it sometimes is as, for example, in Gibbs (1989)) it could also be argued that a lot of service export was realized through employment of construction workers who were exported to work in other countries.

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Interestingly enough, the share of public administration also fell. One might expect the opposite to be true in a socialist economy (society).

Except for handicrafts, the transport & communications sub-sector experienced the fastest decline of employment share. This may be also explained on the basis of backward linkages with the industrial sector. Namely, its share fell in the second sub-period when the trend value of average rate of change of industrial production had fell by almost 5 per cent. Other sectors with relatively few backward linkages to the manufacturing sector, e.g., community-social services, experienced the highest average growth rate (beside financial services). Tourism and catering are also less connected to manufacturing and thus less constrained by its decline. Such movements, connected with the manufacturing sector, are very similar to those remarked in USA[10].

Structural changes in employment are the result of various factors. The differences in how employment in service sub-sectors is affected by some factors may be considered by applying regression techniques.

Because of data availability it will be supposed that employment in sector i (E_i) is affected by only three variables: Y_i, demand for sector i's real output, I_i, actual investments in sector i, and W_i, real wage rate in sector i. Thus, we may write

$$E_i = f(Y_i, I_i, W_i) \tag{2.1}$$

Y_i is assumed to be determined by per capita income levels, that is

$$Y_i = g_i\,(\text{GNP/pc}) \tag{2.2}$$

Therefore, from (2.1) and (2.2) the following function may be tested:

$$E_i = f(g_i\,(\text{GNP/pc}),\ i_i,\ W_i) \tag{2.3}$$

Various functional forms were tested and the results are reported in Tables IV (whole period) and V (two sub-periods)[11], and in Table A in Appendix.

Investments did not prove to be a significant variable. Only in the case of handicrafts they were significant at the 5% level. Regressions including investments are reported in appendix.

The examination of results reported in Tables IV and V shows that in almost all cases variables enter the equations with an a priori expected sign (except in the case of utilities where a positive, although insignificant, parameter sign of variable W is present).

Two kinds of functional forms which perform very similarly are reported, linear and double-log. However, in most cases the double-log form could be preferred on the basis of more explained variation of dependent variable and improved Durbin-Watson statistics.

[10]See Gemmel (1986) for the USA example and also Barker and Dunne (1988) for some conclusions about service and manufacturing linkages.

[11]The periods and sub-sectors for which regressions are reported were determined by data availability. Namely, in 1976 the statistical classification of industries was changed.

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TABLE IV SUMMARY OF REGRESSION RESULTS (1965–88)

	Constant	Gnp/pc	W	R2	DW
Tran. & C.	46843.1 (11.37)	4.90 (34.64)	–16.79 (– 6.97)	0.98	1.17
*Tran. & C	6.17 (18.13)	0.81 (29.80)	– 0.34 (– 6.85)	0.98	1.00
Handicrafts	13669.7 (3.45)	2.89 (14.22)	–17.42 (– 5.57)	0.90	0.95
*Handicrafts	3.56 (3.77)	1.35 (11.37)	– 0.84 (– 4.85)	0.86	0.78
Utilit.	8019.5 (2.57)	0.93 (7.60)	3.33 (1.73)	0.79	0.55
*Utilit.	3.34 (4.48)	0.58 (8.61)	0.18 (1.81)	0.84	0.62
†Social s.	83375.1 (11.15)	11.01 (39.64)	–41.70 (–10.75)	0.99	1.14
*Social s.	6.05 (24.85)	0.93 (47.03)	– 0.39 (–12.51)	0.99	1.60
Public a.	21204.7 (7.87)	2.55 (26.93)	– 7.75 (– 6.39)	0.97	1.26
*Public a.	5.03 (10.73)	0.86 (24.11)	– 0.34 (– 6.22)	0.97	1.12

* means that all variables are in log form.
† Social services include public administration and community-social subsectors summed-up.

Regressions have produced positive coefficients on per capita GNP and negative signs on average wages which implies a positive employment response of sector i to higher demand for its output (via the production function relationship) and a negative employment response to changes in labor cost. However, it should not be overlooked that social and political pressures to absorb the unemployed were present during the whole period. This has also affected the labor demand behaviour of enterprises during recession in the eighties when hiring conditions were unfavourable. Thus, it may be also argued that real wages fell because of disguised employment. Amazingly, this social and political pressure did not result primarily in the growth of employment in public administration which was most directly under political influence but rather in growth in other sub-sectors. This is due to two factors. First, political influence affecting all economic subjects was present and this allowed political authorities to redistribute the excess labor supply away from itself, and, second, so was a naive belief (or demagogy) that constraints on employment in the largely demonized "unproductive sector" would influence the economic situation and public opinion. In fact, the share of public administration in total employment in social sector always varied around 4 per cent with a slight

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TABLE V SUMMARY OF REGRESSION RESULTS

	Constant	Z	W	R^2	DW
1965–76					
Com.-soc.	51330.5	6.85	–15.67	0.98	1.69
	(13.07)	(13.31)	(– 3.30)		
*Com.-so.	5.90	0.83	– 0.28	0.98	1.66
	(22.60)	(13.50)	(– 4.10)		
TT&C	–1.50	12.63	–15.98	0.99	1.95
	(–2.03)	(20.42)	(– 2.31)		
*TT&C	0.79	1.32	– 0.21	0.99	2.01
	(2.02)	(20.38)	(– 2.70)		
1977–88					
Trade	27831.6	8.09	–27.94	0.96	1.66
	(1.09)	(7.93)	(– 6.85)		
*Trade	2.40	1.19	– 0.31	0.96	1.85
	(1.54)	(8.67)	(– 6.76)		
T&C	17181.3	5.76	–41.56	0.89	1.12
	(0.55)	(4.87)	(– 5.26)		
*T&C	0.80	1.67	– 0.87	0.91	1.24
	(0.23)	(5.56)	(– 5.60)		
Health	16189.5	5.72	–27.88	0.91	0.90
	(0.43)	(3.61)	(– 6.29)		
*Health	0.36	1.53	– 0.56	0.94	1.25
	(0.10)	(4.79)	(– 7.18)		
Educat.	56701.4	2.58	–11.17	0.91	0.93
	(3.34)	(3.65)	(– 6.04)		
*Educat.	7.14	0.62	– 0.25	0.92	1.18
	(4.29)	(4.05)	(– 6.40)		
Financ.	–3.53	5.95	–15.60	0.91	0.88
	(–1.11)	(4.50)	(– 5.11)		
*Financ.	–10.20	2.60	– 0.62	0.95	1.26
	(–2.38)	(6.70)	(– 6.24)		

** means that all variables are in log form.*

declining tendency so that there was no clear reason for a vicious campaign against employment in that sector.

Regression results may suggest that the relatively low income elasticity of handicrafts led to a decline of employment in this category. The crisis of traditional handicrafts like shoemaking, pottery, carpentery etc., is a good example of how, with a rising income level, relatively cheaper industrial products reduce demand for the handicraft sector output.

At the other end, tourism, trade and catering are clearly highly income elastic services oriented to individual consumers (with the exception of wholesale trade). Tourism, trade and catering are, via tourism, not only influenced by the rise of domestic per capita income but also by rise of per capita income in other countries,

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especially those which are traditional partners in tourism. Although not captured by regression this factor should also be considered.

III. Service-type Occupations

If we look only at the sub-sectors then every worker employed in some manufacturing sub-sector is a manufacturing worker and every worker in service sub-sector is a service worker. For the purpose of our analysis it is also useful to examine employment from the point of view of the nature or type of occupations in which workers are engaged, because this avoids problems of mixing different job types in the same industry.

As already mentioned, conventional theory and empirical research argue that not only does the share of employment in service sub-sectors grow during development but also that the share of what we may call service-type occupations increases.

According to Gershuny and Miles (1983) a service-type occupation may include any occupation whose immediate output is typically either non-material or ephemeral (sometimes, and very often in Yugoslavia, those occupations are called "non-productive"). Occupations which may be considered, from this point of view, as service-type are white-collar, sales work, catering, cleaning, security and even transport.

Unfortunately, due to statistical data availability, there is no way to aggregate all those types of service occupations for Croatia. Nevertheless, it is possible to draw conclusions about changes in service type occupations partly indirectly and partly on the basis of statistical data for certain type of occupations. Indirectly, it might be concluded that catering and sales occupations have expanded their share in total employment on the basis of previous analysis. There is little, if any, doubt about it.

TABLE VI WHITE/BLUE-COLLAR WORKERS SHARE IN EMPLOYMENT

	Blue-collar		White-collar	
	1967	1986	1967	1986
Total	64.43	57.78	35.57	42.22
Productive serv.	20.90	19.21	79.10	80.79
Non-productive s.[12]	73.42	65.56	26.58	34.44

Source: Vujčić (1919), pp. 55.

Directly, statistical data show that transport workers have increased their share from 5.40 per cent in 1967 to 6.04 per cent in 1986. Finally, Table VI shows the white-collar workers share across all sub-sectors for two census years.

In twenty years the share of white-collar workers in total employment increased for almost 7 per cent. This change in occupational structure should be attributed to a

[12]Non-productive services are the same as social services from Table IV, while productive services are all other sub-sectors summed up.

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growth of the white-collar workers share in productive services[13] rather than to the increased share of non-productive services, which are highly dominated by white-collar workers, in total employment. Namely, the latter rise accounted for less then 1 per cent during the analyzed period.

The examination of Table B in the Appendix, which contains data about the white-collar/blue-collar structure of productive services, suggests another conclusion. As there were no dramatic changes in the occupational structure across major[14] sub-sectors (the smallest change was present in the most important sector—manufacturing) it becomes clear that the growth of white-collar workers is primarily due to the growth of the service sub-sectors share in total employment.

IV. Concluding Remarks

This paper has presented the major characteristics of service sector employment growth in Croatia. It has been shown that the development of service sector employment was in line with a priori theoretical expectations based on the historical data from developed countries. The structural change in terms of sectoral employment was accompanied by the processes of externalization, feminization, and expansion of service-type occupations. However, some characteristic features deserve to be mentioned.

First, the process of tertiarization was, when compared to OECD countries, more rapid in Croatia (whose per capita income is above the average of the upper-middle-income countries). On the other side, the manufacturing sector never expanded so much as in other East-European socialist countries in which it was forcibly promoted by state. Second, equation (1.2.) shows that the main labor force source for rapid growth of employment in services was not, as it is usually argued, the flow of workers from the primary sector but the activization of the previously non-active female labor force. Third, it seems that the growth of employment in service-type occupations in Croatia should be primarily attributed to an increased share of service sub-sectors in total employment rather than to changes of occupational structure within sub-sectors.

Finally, it should be mentioned that this rapid process of tertiarization could be considered in the sense of the Rowthorn and Wells concept. Namely, Rowthorn and Wells (1987) distinguish between two types of de-industrialization: a positive one which does not lead to unemployment, and a negative one which is accompanied by severe recession and consequently unemployment. It could be argued that prior to 1979, despite slightly rising unemployment, the former process was involved because other economic indicators were relatively favourable, but it is more than clear that after 1979, when real incomes and industrial output started to fall and unemployment to rise, the latter, negative, type of tertiarization was present.

[13]Division into productive and non-productive services was made on the basis of the obvious difference in occupational structure.
[14]Here agriculture includes only workers on the social sector so that its share is low.

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APPENDIX

TABLE A FEMALE EMPLOYMENT SHARE IN SERVICES

	1967	1976	1986
Total economy	33.50	38.16	41.59
Transport & C.	12.19	15.06	17.06
Trade	—	—	54.92
Tourism & Cat.	—	—	61.26
TT&C	47.11	52.71	—
Artisanery	23.59	20.54	24.83
Utilities	15.66	19.20	17.42
Financial	—	—	53.77
Education	—	—	62.56
Health	—	—	79.49
Comm-social	63.96	67.09	—
Public adm.	40.88	55.44	56.87

Source: calculated from the data in Statistical Yearbook of Croatia, various years.

TABLE B SUMMARY OF REGRESSION RESULTS (1965–88)

	Constant	Z	W	I	R^2	DW
Tran. & C.	–3.46	78448.2	–4.50	3953.0	0.97	1.19
	(–7.86)	(23.50)	(–7.74)	(1.63)		
Artisan.	–1.64	49355.5	–4.01	6211.8	0.93	1.57
	(–6.22)	(15.75)	(–8.04)	(3.86)		
Utilit.	–1.45	15662.3	3776.5	–191.5	0.81	0.65
	(–6.93)	(8.40)	(1.32)	(–0.10)		
†Social s.	–7.63	1.713	–10.00	9121.7	0.99	1.57
	(–8.96)	(21.90)	(–11.82)	(1.48)		
Public a.	–1.83	38698.1	–1.92	1098.8	0.97	1.61
	(–6.95)	(14.67)	(–8.47)	(1.32)		
1965–76						
Com.-soc.	–5.94	1.02	–3.25	–3259.3	0.98	2.13
	(–9.93)	(8.32)	(–4.23)	(–0.51)		
TT&C	–1.30	1.81	–3.95	–7.23	0.98	1.96
	(10.54)	(13.66)	(–7.23)	(–0.34)		
1977–88						
Trade	–3.02	56489.6	–1.28	2673.5	0.83	0.48
	(–0.99)	(3.84)	(–0.46)	(0.41)		
T&C	–4.62	51123.4	6320.0	702.0	0.97	1.42
	(–4.21)	(11.24)	(0.62)	(0.35)		
Health	–5.46	67518.5	–3120.6	3515.2	0.99	1.40
	(–4.77)	(10.16)	(–0.39)	(1.40)		
Educat.	–2.61	33263.3	–5232.8	–1199.6	0.97	1.34
	(–2.98)	(7.05)	(0.78)	(–0.64)		
Financ.	–7.03	67815.9	15271.2	–955.2	0.92	1.57
	(–3.35)	(5.38)	(1.20)	(–0.37)		

†Social services are Public administration and Community-social sub-sectors summed-up.

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TABLE C WHITE-COLLAR WORKERS SHARE IN EMPLOYMENT OF "OTHER SUB-SECTORS"

	Blue-collars		White-collars	
	1967	1986	1967	1986
Manufacturing	75.91	74.03	24.09	25.97
Construction	78.91	75.25	21.09	24.75
Agriculture	73.89	64.32	26.11	35.68
Forestry	73.96	63.88	26.04	36.12
Transport & C.	69.46	64.36	30.54	35.64
TT&C	61.15	—	38.85	—
Trade	—	50.61	–	49.39
Tourism & Cat.	—	65.12	—	34.88
Utilities	65.13	48.74	34.87	51.26
Artisanery	81.59	75.08	18.41	24.92
Financial	—	12.80	—	87.20

Source: Vujčić (1991), pp. 55.

CHART A ANNUAL GROWTH OF GDP AND ACTUAL INVESTMENTS IN CROATIA

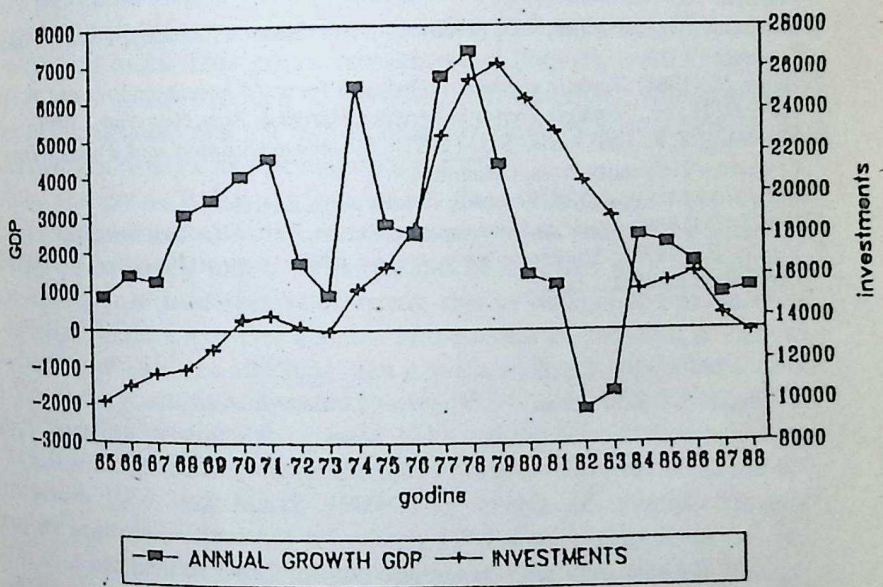

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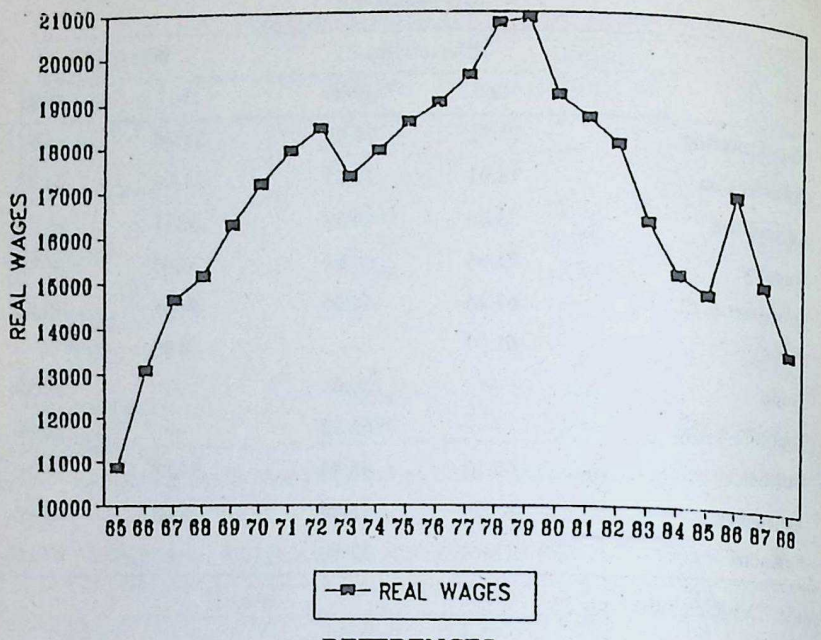
CHART B REAL WAGES IN CROATIA



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FACTORS ASSOCIATED WITH FERTILITY MODERATION IN INDIA

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Introduction: Indian socio-demographic scene

India is the second largest populated country (next to China) in the world. According to United Nations Statistical Office, China's population as on 1.7.1990 was estimated at 1160.0 million. Today India's population has increased from 361 million in 1951 to 843.9 million as on 1.3.1991.[1] This is an increase by 2.34 times during 1951–91. The birth rate of 49.2 and death rate of 42.6 in 1911 have declined to birth rate of 31.3 and death rate of 10.9 in 1987. So far as population growth rate is concerned it increased from 0.9 during 1911–21 to 20.4 in 1988. The expectation of life at birth has increased by 21.5 years for males and 23.0 years for females between 1951–80 and is expected to be 58.1 years for males and 59.1 years for females between 1986–91.

Among the bio-social and economic factors, the female age at marriage increased from 16.1 in 1962 to 18.3 years in 1981. The female literacy increased from 13.0 per cent in 1961 to 39.4 per cent in 1991 i.e. an increase by more than three times in that 1961; per capita net national product increased from Rs. 245.5 in 1950–51 to Rs. 3284.2 at current prices and from Rs. 466.0 in 1950–51 at 1970–71 prices to Rs. 1918.2 in 1987–88 at 1980–81 prices.[2] Although India is basically a traditional and yet a predominantly agrarian rural society, it has made definite strides in various developmental sectors.

Fertility changes in India, as elsewhere in the world, are governed by the prevailing bio-social and economic conditions as well as cultural and religious values attached to family formation institutions of marriage, child bearing etc. The accelerated growth of population occurs due to changes and interplay of these variables. India is the first country in the world to introduce an official family planning programme attaching high importance to the population control policy. The country will have invested Rupees 66.5 billion (US$ 5.3 billion) in the family planning programme between 1956 and the seventh five year plan (1985–90). It is estimated that the programme efforts have averted 106.2 million births between 1956 and March 1989. The number of couples currently protected by various methods as on March 1989 were estimated to be 58.1 million or 41.2 per cent of 148.2 million eligible couples with wives in the age-group 15–44 years.

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Focus of the analysis

This paper broadly attempts to examine the fertility changes occurri amongst 14 major states of India over a period of time ranging from 1960's t 1988. Efforts have also been made to view the current fertility level an examine the occurred changes in it. This is specifically with reference to direc fertility moderation programmes. It is with this purpose the considere socio-demographic facts are the average number of couples protected in vario states. The links are also being traced between indirect fertility moderatio measures such as female age at marriage, female literacy, Infant Mortality Ra (IMR), per cent of population below poverty line, per capita expenditure o health and family welfare; per capita income, etc. and their relationship wi birth rate changes in various states over the period of time.

Sources and limitations of data

The fertility levels analysed in this paper are not the absolute, diehard exact levels of vital rates but rather indicative levels of approximations. The time period to which sets of data refer, also at times, may not pointedly be for the particular year but for the nearmost year for which data were uniformly and readily available. The main sources of data are sample registration system family welfare statistics, Indian Health Information Year-book, reports and papers from Indian censuses.

Changes in fertility during 1961–71

The fertility levels for decades 1961–71, 1971–81 and 1981–88 for the states of India are given in Table 2. It reveals that Punjab was perhaps the only state where the birth rate declined by 5–10 points in the decade 1960–70 while in rest of the thirteen states, birth rate either did not decline or declined by less than 2 points during the same period.

Changes in fertility during 1971–81

The fertility levels in two most populous states viz. Uttar Pradesh and Bihar with a population of about 181 million in 1981 had not either shown any decline in birth rate or still continued to remain in the category of states shown less than 2 points decline. On the contrary Uttar Pradesh showed an increase in the birth rate from 41.5 in 1961–71 decade to 42.5 during 1971–81 decade.

The state of Punjab which had shown a decline of 5–10 points birth rate in 1961–71 decade joined with the state of Gujarat alongwith the states of Andhra Pradesh, Karnataka and Rajasthan in the category of less than 2 points decline in birth rate states. These five states together had about 175 million population in 1981. Thus, seven major states in the category of less than 5 points decline in birth rate had about 356 million (52 per cent) of population in 1981 as compared to 464 million (84 per cent) population in the decade 1961–71 for the same decline.

TABLE 1

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TABLE 1
STATEWISE SOCIO-ECONOMIC AND DEMOGRAPHIC PROFILE OF INDIA

S. No.	State/UT	Total population 1991 (lakhs)	Female population 1991 (lakhs)	% Female literates 1991	Age at marriage 1981	Crude birth rate				% Decline in CBR 1960–88	% Couple protection rate	IMR 1987	Per capita income (Rs.)	Per capita expenditure (H&FW) (Rs.)	% Population below poverty line
						1960	1970	1980	1988						
1.	Uttar Pradesh	1387.60	650.14	26.02	16.3	41.5	42.5	43.8	37.1	4.1	32.2	126	2146	35.96	45.3
2.	Bihar	863.39	411.92	23.10	16.1	43.4	41.9	41.1	37.3	6.1	25.8	102	1802	33.56	49.5
3.	Maharashtra	787.07	380.55	50.51	18.2	41.2	41.0	29.7	29.4	11.8	55.1	66	3793	100.39	34.9
4.	West Bengal	679.83	325.21	47.15	18.6	42.9	44.3	36.4	28.4	14.5	32.7	72	2988	46.60	39.2
5.	Andhra Pradesh	663.05	326.81	33.71	16.8	39.7	39.2	35.9	27.4	12.3	41.9	79	2333	49.46	36.4
6.	Madhya Pradesh	661.36	319.04	28.39	16.1	43.2	46.6	39.6	37.0	6.2	38.9	119	2020	52.71	46.2
7.	Tamil Nadu	556.38	274.20	52.29	19.7	34.9	36.8	30.4	22.7	12.2	55.0	76	2732	55.94	39.6
8.	Karnataka	448.17	219.56	44.34	18.6	41.6	39.9	37.8	28.7	12.9	44.2	75	2486	55.16	35.0
9.	Rajasthan	438.81	209.45	20.84	15.6	42.7	42.7	40.0	33.3	9.4	28.9	103	2150	79.06	34.3
10.	Gujarat	411.74	199.02	48.50	19.1	45.7	41.6	39.2	29.5	16.2	55.2	97	2332	70.53	24.3
11.	Orissa	315.12	155.32	34.40	18.7	40.2	41.3	34.6	31.9	8.3	39.6	126	1957	40.07	42.6
12.	Kerala	290.11	147.93	86.93	21.3	38.9	37.5	28.7	20.3	18.6	49.7	26	2371	65.59	26.8
13.	Punjab	201.91	94.96	49.72	20.6	44.7	36.9	32.1	28.5	16.2	69.6	62	4719	68.12	13.8
14.	Haryana	163.18	76.12	40.94	17.4	44.7	44.5	37.3	33.8	10.9	59.4	87	3925	63.20	15.6
15.	All India	8439.31	4061.33	39.42	18.0	41.7	41.2	37.1	31.5	10.2	41.9	95	2974	60.37	37.4

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Another seven states i.e. Kerala, Tamilnadu, Haryana, Orissa, Maharashtra, West Bengal and Madhya Pradesh which had seen a decline of over 5 points in birth rate had 292 million (42 per cent) of India's population in 1981 as compared to 13.6 million (2.5 per cent) population in the decade in 1961–71.

The recorded changes in fertility level in 1971–81 decade over the 1961–71 decade suggest that fertility underwent moderation during 1971–81 decade.

Changes in fertility in 1981–88

The state of Maharashtra which was in the category of less than two points decline in birth rate in 1961–71 decade and had improved its position to more than 10 points decline during 1971–81 decade, has again fallen back to less than two points decline in birth rate category during 1981–88 period.

The state of Bihar which had shown a decline of less than 2 points during 1961–80 improved the declining trend from less than 2 points to 2–5 points during 1981–88 and joined the state of Punjab in the same category. While the states of Madhya Pradesh, Orissa and Haryana which had shown a decline in CBR between 5–10 points in 1971–81 again fall back to 2–5 points decline category. These six major states in the category of less than 5 points decline in birth rate had 299.2 million (35.5 per cent) of population in 1991 as compared to 356 million (52 per cent) in the decade 1971–81 for the same decline.

The state of Uttar Pradesh, which had remained in category of less than 2 points moderation in birth rate until the decade 1971–81, has joined other states of West Bengal, Andhra Pradesh, Tamil Nadu, Karnataka, Rajasthan, Gujarat and Kerala in the category of 5–10 points decline in birth rate, had 487.6 million (57.8 per cent) population in the decade 1981–91.

The State of Uttar Pradesh came in the category of 2–5 points decline in birth rate, the 4 states of Bihar, Maharashtra, Rajasthan and Orissa declined between 5–10 points in terms of birth rate and 9 states of Maharashtra, West Bengal, Andhra Pradesh, Tamil Nadu, Karnataka, Gujarat, Kerala, Punjab and Haryana have been moderated by more than 10 point in birth rate during the period 1960–88.

The recorded changes in fertility levels in the 1981–1991 decade over the 1971–81 decade indicate that fertility levels are still stagnating in the state of Maharashtra and poses a concern to policy-makers and administrators. The states of Uttar Pradesh and Bihar which accounted for 225.1 million population (26.7 per cent of India's population) in 1991 and had not shown much decline in birth rate earlier have started showing decline in birth rate. The over-all fertility levels during 1980–88 suggested that fertility level had further undergone moderation over the decade 1971–81 (Table 2).

For the purpose of seeing whether there exists a close link between family planning programme as a weapon in the armoury of Central Government to affect fertility moderation, an attempt has been made to study and analyse the 'programme efforts' in terms of average number of couples effectively protected and changes in birth rate in 14 major states over the period of time. These states

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TABLE 2.
NUMBER OF POINTS DECLINE IN CRUDE BIRTH RATE 1960–88

No. of points decline in C.B.R.	1960–70		1970–80		1980–88		1960–88	
	Name of State	Total No. of states	Name of state	No. of states	Name of state	No. of states	Name of state	No. of states
Did not decline/declined 2 points	Maharashtra, Kerala, A.P., U.P., Bihar, Orissa, Karnataka, Rajasthan, Haryana, Tamil Nadu, West Bengal, M.P.	12	Bihar, U.P.	2	Maharashtra	1	—	—
Decline in CBR between 2–5 points	Gujarat	1	Gujarat, Punjab, A.P., Karnataka	5	Bihar, M.P., Orissa, Punjab, Haryana	5	U.P.	1
Decline in CBR between 5–10 points	Punjab	1	Haryana, Kerala, Tamil Nadu, Orissa, West Bengal, M.P.	6	U.P., West Bengal, A.P., Tamil Nadu, Karnataka, Rajasthan, Gujarat, Kerala	8	Bihar, M.P. Rajasthan, Orissa	4
Decline in CBR by more than 10 points	—	—	Maharashtra	1	—	—	Maharashtra, West Bengal, A.P., Tamil Nadu, Karnataka, Gujarat, Kerala, Punjab, Haryana	9

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have been grouped into three broad categories depending upon their family planning performance as high level, medium level and low level of performance emerging out of the average number of couples effectively protected during 1971–89 as shown in Table 3.

A close look at the data reveals Uttar Pradesh, Bihar, Rajasthan and West Bengal fall into group III reflecting a low level of efforts in terms of couples effectively protected for fertility moderation. Resultantly except West-Bengal, rest of the three states even today have high birth rates in the country. This indicated that in West Bengal besides the couple protection rate other socio-economic factors too have played significant role in reduction of the fertility levels.

While the most striking feature of three states of Uttar Pradesh, Bihar and Rajasthan, with about 32 per cent of India's population in 1991 are the lowest one in the family planning performance. So, the possible inference may come that fertility moderation efforts of the Government of India have not made any significant dent in fertility reduction in these three states. It requires more rigorous efforts to bring these states at par with other states. It is not only required because of the fact that there hardly exists any substantial changes in their fertility level but also from the point of view of their overtly demographic backwardness in terms of low age at marriage, adverse sex ratio towards female high IMR, and low level of literacy of the population in these states.

In contrast to this category, the high programme performance states are Punjab, Haryana, Gujarat, Maharashtra, Tamil Nadu and Kerala. Among these six states, the states of Kerala and Tamil Nadu have attained growth rate almost near to unity (1.31–1.39) with CPR of only 49.7 per cent and 55.0 per cent indicating that other social and economic factors have also played a role in declining fertility in these states. The other two states i.e. Punjab and Gujarat attained fertility rates of 28.5 and 29.5 respectively. In the states of Maharashtra fertility rate with 55.1 per cent couple protection rate is almost stagnating around 29 since 1980's indicating poor quality of acceptors and wide gap between what the programme effort aims at and the perception of family size among the population of the state. This view is supported by survey conducted in rural Maharashtra by Mason and Taj (1987)[3] according to which a couple on average desired 3.3 children out of which two sons were preferred by them for an ideal family size. While Haryana with 59.4 per cent couple protection rate have 33.8 birth rate in 1988 as compared to Rajasthan which falls in low performance category with 33.3 birth rate. Haryana, like Maharashtra, appears to have the same situation and there is also a possibility that these two states are showing higher couple protection rate than their actual achievement. These states need to be considered as low performance states as far as the impact of family planning programme is concerned.

The third category of intermediary states of Andhra Pradesh, Orissa, Madhya Pradesh and Karnataka have been reported to have achieved an average level of family planning programme efforts to moderate fertility. The states of Andhra Pradesh and

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Karnataka with about 42 per cent couple protection rate have achieved higher moderation in fertility levels than all the high performance couple protection rate states except Kerala. In fact all the four south zone states on the whole have really reduced their fertility levels with less couple protection rate indicating that beside F.P.P. efforts other social and economic factors are also responsible for reduction in fertility levels. Like Haryana the state of Orissa and Madhya Pradesh appears to have the same situation in respective states as far as impact of couple protection rate and fertility reduction is concerned (Table 3).

TABLE 3

Relative level of programme emerging through direct fertility related policies	Direct programme efforts in terms of number of couples effectively protected in states	% Couple protection rate	Changes in crude birth rate in			
			1960	1970	1980	1988
High	Maharashtra	55.1	41.2	41.0	29.7	29.4
	Tamil Nadu	55.0	34.9	36.8	30.4	22.7
	Gujarat	55.2	45.7	41.6	39.2	29.5
	Kerala	49.7	38.9	37.5	28.7	20.3
	Punjab	69.6	44.7	36.9	32.1	28.5
	Haryana	59.4	44.7	44.5	37.3	33.8
Medium	Andhra Pradesh	41.9	39.7	39.2	35.9	27.4
	Orissa	39.6	40.2	41.3	34.6	31.9
	Madhya Pradesh	38.9	43.2	46.6	39.6	37.0
	Karnatata	44.2	41.6	39.9	37.8	28.7
Low	Uttar Pradesh	32.2	41.5	42.5	43.8	37.1
	Bihar	25.8	43.4	41.9	41.1	37.3
	West Bengal	32.7	42.9	44.3	36.4	28.4
	Rajasthan	28.9	42.7	42.7	40.0	33.3

Low <35%, Medium 35–45%, High 45+

When these states were rearranged according to points decline in crude birth rate, the impact of couple protection rate became more clear. The three high performance states i.e. Maharashtra, Haryana and Tamil Nadu and the state of West Bengal from low performance categories shifted their position to medium decline in fertility category indicating the real trends for the impact of couple protection rate on fertility decline in these states (Table 4). The shift of Tamil Nadu from high performance category to medium performance category could be explained from the fact that total decline in fertility level during 1960–88 does not exceed 15 points, otherwise it belongs to high decline in fertility level category along with the state of Kerala. Similarly, the states of Gujarat and Punjab which have more than 15 points decline in fertility levels, according to their present situation, need to be considered in medium decline in fertility level along with the states of AP, Maharashtra, Karnataka and West Bengal while the state of Haryana could be grouped with the states of UP, Bihar, MP, Rajasthan and Orissa as far as present trend in fertility decline is concerned.

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TABLE 4

DISTRIBUTION OF STATES ACCORDING TO NUMBER OF POINTS DECLINE IN CRUDE BIRTH RATE IN THE PERIOD 1962–88 WITH REFERENCE TO COUPLES EFFECTIVELY PROTECTED AS ON 1.3.1989.

No. of points decline in the CBR during 1960–88	No. of states	Name of States	Couples effectively protected (1.3.1989)	State's CBR (1988)	State's population (inlakhs)
1. Did not decline or declined by less than 10 points	5	Uttar Pradesh	32.2	37.1	1387.60
		Bihar	25.8	37.3	863.39
		Madhya Pradesh	38.9	37.0	661.36
		Rajasthan	28.9	33.3	438.81
		Orissa	39.6	31.9	315.12
2. Declined between 10–15 points	6	Andhra Pradesh	41.9	27.4	663.05
		Haryana	59.4	33.8	163.18
		Maharashtra	55.1	29.4	787.07
		Tamil Nadu	55.0	22.7	556.38
		Karnataka	44.2	28.7	448.17
		West Bengal	32.7	28.4	679.83
3. Declined by 15 points and more	3	Gujarat	55.2	29.5	411.74
		Punjab	69.6	28.5	201.91
		Kerala	49.7	20.3	290.11

On the whole, family planning programmes as a direct factor in moderation of fertility levels have a meaningful role in lowering the fertility levels. It has been estimated that 27.71 per cent (single 4) of reduction in fertility is due to this factor alone in the country. The universe correlation between CPR and CBR in various states is observed to be significant ($r = -0.489$).

Fertility changes and age at marriage

It is observed that in India girls marry early and universally. This pattern is due to 'feasibility' and 'desirability' of marriage in a socio-economic context of joint family set up in India. By and large, low living conditions, stigma for marrying late, social penalities for childlessness and no economic opportunity and support or in other sense no real economic status for women add to this early age and universality of marriage.

Raising the age at marriage, particularly for females, to 18 years has been made as a population control measure in view of its effect on reproductive span, and its effect on fertility schedule which would ultimately result in reduction in birth rate. The literature on the subject by and large suggests a close link between high fertility and lower age at marriage.

The states have been classified into three major groups belonging to high, medium and low age at marriage as shown in Table 5. The overall picture which emerges out of this data indicates an association between crude birth rate and female age at marriage amongst various states of India. The general contention, that higher the age at marriage, lower is the birth rate is broadly supported by

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our analysis. Change in crude birth rate for major Indian states broadly concludes this view in case of female age at marriage (1981) and birth rate in 1988. The correlation between female age at marriage and the birth rate is found to be significant ($r = -.569$). Similar observations are recorded in the works of Baravarjappa and Belvalgded, Aggarwal, Talwar, Talwar and Seal.[5–8] In the decomposition of fertility levels in 1985 it has been estimated that 17.4 per cent of decline in fertility was due to increase in age at marriage in India (Singal).

States identified as having relatively high female age at marriage in 1981 (between 19–22 years) are Kerala, Tamil Nadu, Punjab and Gujarat. Among these, two states of Kerala and Tamil Nadu reflect low curde birth rate while the states of Punjab and Gujarat indicate birth rate comparable to category of medium fertility decline as given in Table 5.

TABLE 5
STATES WITH CHANGES IN CRUDE BIRTH RATES AND FEMALE AGE AT MARRIAGE IN INDIA

Relative level of social change emerging through direct fertility related policies on age at marriage	No. of states with female age at marriage		Changes in crude birth rate in			
	Name of state	Age at marriage	1960	1970	1980	1988
High (19 years and above)	Kerala	21.3	38.9	37.5	28.7	20.3
	Tamil Nadu	19.7	34.9	36.8	30.4	22.7
	Punjab	26.6	44.9	36.9	32.1	28.5
	Gujarat	19.1	45.9	41.6	39.2	29.5
Medium (between 16.5–19 years)	Karnataka	18.6	41.6	39.9	37.8	28.7
	West Bengal	18.6	42.9	44.3	36.4	28.4
	Maharashtra	18.2	41.2	41.0	29.7	29.4
	Orissa	18.7	40.2	41.3	34.6	31.9
	Haryana	17.4	44.7	44.5	37.3	33.8
	Andhra Pradesh	16.8	39.7	39.2	35.9	27.4
Low (below 16.5 years)	Uttar Pradesh	16.3	41.5	42.5	43.8	37.1
	Bihar	16.1	43.4	41.9	41.1	37.3
	Rajasthan	15.3	42.7	42.7	40.0	33.3
	Madhya Pradesh	16.1	43.2	46.6	39.6	37.0

The second group of states are those where female age at marriage lies between 16.5–19 years and belong to medium category. In this group, out of six states four suggest moderate birth rate, while other two states of Orissa and Haryana show birth rate comparable to category of low birth rate states.

The remaining four states i.e. Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh have not only the female age at marriage below 16.5 years of age but also have witnessed high crude birth rate indicating that female age at marriage in these states has not contributed much in reduction of fertility levels.

The changes in fertility level over three decades in terms of points decline in birth rates in various states have been shown in Table 6. The first group of five

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TABLE 6
NUMBER OF POINTS DECLINE IN CRUDE BIRTH RATE IN THE PERIOD 1960–88 WITH REFERENCE TO FEMALE AGE AT MARRIAGE, 1981.

No. of points decline in the crude birth rate during 1960–88	No. of states	Name of state	Female age at marriage (1981)	State's CBR (1988)	State's population (in lakhs)
1. Did not decline by less than 10 points	5	Uttar Pradesh	16.3	37.1	1387.60
		Bihar	16.1	37.3	863.39
		Madhya Pradesh	16.1	37.0	661.36
		Rajasthan	15.6	33.3	438.81
		Orissa	18.7	31.9	315.12
2. Declined between 10–15 points	6	Andhra Pradesh	16.8	27.4	663.05
		Haryana	17.4	33.8	163.18
		Maharashtra	18.2	29.4	787.07
		Tamil Nadu	19.7	22.7	556.38
		Karnataka	18.6	28.7	448.57
		West Bengal	18.6	28.4	679.83
3. Declined by15 points and more	3	Gujarat	19.1	29.5	411.74
		Punjab	20.6	28.5	201.91
		Kerala	21.3	20.3	290.11

states consisted of Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan and Orissa where female age at marriage was ranging from 15.6 to 18.7 years. The second group of states consisted of Andhra Pradesh, Haryana, Maharashtra, Tamil Nadu, Karnataka and West Bengal, where fertility decline was between 10–15 points; the female age at marriage in these states varied from 16.8 to 19.7 years. Haryana is the only state which has declined fertility levels between 10–15 points but birth rate is comparable to states with less than 10 points decline in birth rate. Similarly, Tamil Nadu is another state with 10–15 points decline in fertility levels but the birth rate is comparable to Kerala where decline in fertility is more than 15 points during the same period.

The third group of states are Gujarat, Punjab and Kerala where female age at marriage was ranging between 19.1 to 21.3 years and where fertility decline was over 15 points. Kerala (in high category) and Tamil Nadu (in medium category) of female age at marriage are the only two states which have attained low birth rate among the 14 major states in the country.

Changes in fertility level and levels of female literacy

Literacy levels for females as indicated by the 1991 census and changes in birth rates during 1960–88 are examined in Table 7. Keeping in view 1991 literacy rates, the states have been categorised into high, medium and low levels of educational attainment.

The high level of educational attainment states are Kerala, Tamil Nadu and Maharashtra where literacy level ranges between 50.51 in Maharashtra to 86.93 in Kerala. In 1960's all these states had moderate level birth rates. During

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1960–88, there is a substantial fall in birth rate in these states. However, Maharashtra is stagnating around 29 (CBR) since 1980's. In general, high literacy level states have lower birth rate than other states where the literacy levels are low. The value of correlation between educational level and decline in fertility level was found to be hightly significant ($r = -.806$) at 1 per cent level.

Seven states are placed in medium category of female literacy of 30–50 per cent according to 1991 census. In 1960's all these states had shown high birth rates of around 40 and above. In 1988 five states of Punjab, Gujarat, West Bengal, Karnataka and Madhya Pradesh had birth rate below 30 while the states of Orissa and Haryana had birth rates of 31.9 and 33.8 respectively indicating that these two states have higher birth rate in relation to literacy levels in these states. The other five states have moderate birth rate with moderate literacy levels.

The four states of Madhya Pradesh, Uttar Pradesh, Bihar and Rajasthan fall in low level of educational attainment by females as per 1991 census. It may be seen that these four states had high birth rate in 1960's and continue to have high birth rate even in 1988 after a lapse of 28 years.

The above analysis indicated important role of education in depressing birth rate as high female literacy level states had lower birth rate and low level of female literacy level states had high birth rates. The relationship between literacy and birth rate with respect to the three groups of States seems to be collaborated by comparing the correlation of literacy and birth rate in all the three groups. A strong significant inverse correlationship is found between female literacy (1991) and birth rate (1988) ($r = -.806$) (Table 7).

TABLE 7
FEMALE LITERACY LEVELS IN 1991 AND CHANGES IN CRUDE BIRTH RATE

Relative level of attainment of educational level	No. of states	Name of state	% Female literates in 1991	Changes in crude birth rates in			
				1960	1970	1980	1988
High	3	Kerala	86.93	38.9	37.5	28.7	20.3
		Tamil Nadu	52.29	34.9	36.8	30.4	22.7
		Maharashtra	50.51	41.2	41.0	29.7	29.4
Medium	7	Punjab	49.72	44.9	36.9	32.1	20.5
		Gujarat	48.50	45.7	41.6	39.2	29.5
		West Bengal	47.15	42.9	44.3	36.9	28.4
		Karnataka	44.34	41.6	39.9	37.8	28.7
		Haryana	40.94	44.7	44.5	37.3	33.8
		Orissa	34.40	40.2	41.3	34.6	31.9
		Andhra Pradesh	33.71	39.7	39.2	35.9	27.4
Low	4	Madhya Pradesh	28.39	43.2	46.6	39.6	37.0
		Uttar Pradesh	26.02	41.5	42.5	43.8	37.1
		Bihar	23.10	43.4	41.9	41.9	37.3
		Rajasthan	20.84	42.7	42.7	40.0	33.3

Low <30%, Medium 30–50%, High 50+

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It will be better rather than comparing correlations of individual variables with fertility/birth rate, joint effect and individual contributions when all the desired variables are taken together and studied. Because female literacy, IMR, age at marriage, per capita income all are correlated and so will show multiplier effect, therefore, their independent linear combinations have to be taken for studying, discussion argument, analysis and then stepwise regression.

Infant mortality rate and birth rate

Infant mortality levels in 1987 and changes in birth rates during 1960–88 are examined in Table 8. Based on IMR levels in 1987, the states have been grouped into high, medium and low level categories. An overview of the data strongly supports the view that infant mortality is related to birth rate.

The high infant mortality states (Uttar Pradesh, Orissa, Madhya Pradesh, Rajasthan, Bihar and Gujarat) reveal that these states had high birth rates from 1960 to 1988 except for the state of Gujarat during 1988. In 1988 Gujarat had birth rate of 29.5 which is comparable to moderate birth rate states.

The medium infant mortality rate states are Haryana, Andhra Pradesh, Tamil Nadu, Karnataka and West Bengal. (Except for the state of Haryana, all the states have either moderate or low birth rates.) Haryana, which has IMR nearer to the level of high IMR states, had birth rate of 33.8 in 1988 and could be included in high infant mortality states category, while the states of Tamil Nadu with IMR of 76 had low birth rate in 1988 and could be grouped with Kerala which had low IMR in 1987 and low birth rate in 1988.

The low infant mortality rate states are Maharashtra, Punjab and Kerala. Except Kerala other states have moderate birth rate. The correlations worked out

TABLE 8
INFANT MORTALITY RATE IN 1987 AND CHANGES IN CRUDE BIRTH RATES

Relative level of IMR in 1987	No. of states	Name of state	IMR level in 1987	Changes in crude birth rates in			
				1960	1970	1980	1988
High	6	Uttar Pradesh	126	41.5	42.5	43.8	37.1
		Orissa	126	40.2	41.3	34.6	31.9
		Madhya Pradesh	119	43.2	46.6	39.6	37.0
		Rajasthan	103	42.7	42.7	40.0	33.3
		Bihar	102	43.4	41.9	41.9	37.3
		Gujarat	97	45.7	39.2	39.2	29.5
Medium	5	Haryana	87	44.7	44.5	37.3	33.8
		Andhra Pradesh	79	39.7	39.2	35.9	27.4
		Tamil Nadu	76	34.9	36.8	30.4	22.7
		Karnataka	75	41.6	39.9	37.8	28.7
		West Bengal	72	42.9	44.3	36.4	28.4
Low	3	Maharashtra	66	41.2	41.0	29.7	29.4
		Punjab	62	44.9	36.9	32.1	20.5
		Kerala	26	38.9	37.5	28.7	20.3

Low 70, Medium 70–90, High 90 +

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between infant mortality rate and birth rate within each group showed highly positive relationship indicating that high IMR tends to keep also a high birth rate. The overall correlation between IMR and birth rate was found to be $r = .827$ significant at 1% level.

Population below poverty line and birth rate

Population below poverty line in 1983–84 and changes in birth rate during 1960–88 are examined in Table 9. States have been grouped into high, medium and low level categories based on percentage of population below the poverty line. A peep into the data shows that states having higher percentage of population below the poverty line had in general higher birth rate.

TABLE 9
PERCENTAGE OF POPULATION BELOW POVERTY LINE AND CHANGES IN CRUDE BIRTH RATE

Relative level of poverty line	No. of states	Name of state	% Population below poverty line (83–84)	Changes in crude birth rates in			
				1960	1970	1980	1988
High	4	Orissa	42.8	40.2	41.3	34.6	31.9
		Uttar Pradesh	45.3	41.5	42.5	43.8	37.1
		Madhya Pradesh	46.2	43.2	46.6	39.6	37.1
		Bihar	49.5	43.4	41.9	41.9	37.3
Medium	6	Tamil Nadu	39.6	34.9	36.8	30.4	22.7
		West Bengal	39.2	42.9	44.3	36.4	28.4
		Andhra Pradesh	36.4	39.7	39.2	35.9	27.4
		Karnataka	35.0	41.6	39.9	37.8	28.7
		Maharashtra	34.9	41.2	41.0	29.7	29.4
		Rajasthan	34.3	42.7	42.7	40.0	33.3
Low	4	Kerala	26.8	38.9	37.5	28.7	20.3
		Gujarat	24.3	45.7	41.6	39.2	29.5
		Haryana	15.6	44.7	44.5	37.3	33.8
		Punjab	13.8	44.9	36.9	32.1	28.5

Low <30 Medium 30–40 High 40+

Examining the three groups of states classified as high, medium and low percentage of population below poverty line, it may be seen that the high group states of Orissa, Uttar Pradesh, Madhya Pradesh and Bihar also had higher birth rates in 1988.

In the group of the states classified as 'medium' in terms of percentages of population below poverty line, all states (except Rajasthan) had either moderate or low birth rate in 1988. The state of Tamil Nadu with nearly 40 per cent population below poverty line had birth rate which came under low category indicating that other socio-economic factors had played a major role in fertility reduction in the state.

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In the third group states of low percent of population below poverty line are Kerala, Gujarat, Haryana and Punjab. Among these two states have moderate birth rate and the state of Haryana has high birth rate indicating an inverse relationship between percent of population below poverty line and birth rate. The inverse relationship between population below poverty line and birth rate in Haryana shows that the data seem to have some inherent inconsistency.

The overall relationship between percent population below poverty line and birth rate ($r = .374$) showed a weak positive relationship, insignificant at 1% level. However, it is presumed to be a better macro indicator of economic status of people than income.

Per capita income and birth rate

Like the proportion of population below the poverty line, per capita income is another variable which could be used to explain changes in fertility levels. The per capita income in 1986–87 and birth rates during 1960–88 are examined in Table 10. A look on the table shows that income is inversely relatead to birth rate. From states classified into 'high', 'medium' and 'low' per capita income categories it could be noted that the states of Punjab, Maharashtra, Gujarat have moderate birth rate and the state of Haryana high birth rate but all these states are in high per capita income category.

The states which have been grouped into moderate per capita income are West Bengal, Tamil Nadu, Karnataka, Kerala and Andhra Pradesh. Among this

TABLE 10
PER CAPITA INCOME AND BIRTH RATES

Level of per capita income	No. of states	Name of state	Per capita income (Rs.)	Changes in crude birth rates in			
				1960	1970	1980	1988
High	4	Punjab	4719	44.9	36.9	32.1	28.5
		Haryana	3925	44.7	44.5	37.3	33.8
		Maharashtra	3793	41.2	41.0	29.7	29.4
		Gujarat	3223	45.7	41.6	39.2	29.5
Medium	5	West Bengal	2988	42.9	44.3	36.4	28.4
		Tamil Nadu	2732	34.9	36.8	30.4	22.7
		Karnataka	2486	41.6	39.9	37.8	28.7
		Kerala	2371	38.9	37.5	28.7	20.3
		A.P.	2333	39.7	39.2	35.9	27.4
Low	5	Rajasthan	2150	42.7	42.7	40.0	33.3
		Uttar Pradesh	2146	41.5	42.5	43.8	37.1
		M.P.	2020	43.2	46.6	39.6	37.0
		Orissa	1957	40.2	41.3	34.6	31.9
		Bihar	1802	43.4	41.9	41.9	37.3

Low < 200, Medium 2000–3000, High 3000+

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category the states of Tamil Nadu and Kerala have low birth rate and the rest moderate birth rate.

In the low per capita income category are the states of Rajasthan, Uttar Pradesh, Madhya Pradesh, Orissa and Bihar and all these state have high birth rates in 1988.

The overall relationship between per capita income and birth rate ($r = -.248$) showed an inverse weak relationship and insignificant at 1% level.

Per-capita expenditure on Health and & Family Welfare and birth rate

The per capita expenditure on Health and Family Welfare in 1986–87 and changes in birth rate during 1960–88 are presented and examined in Table 11. An overview of groups formed on the basis of high, medium and low per capita expenditure on Health and Family Welfare show variations within groups. Somehow this does not seem an agreeable indicator to test the significance of effect of expenditure on birth rate.

TABLE 11
PER CAPITA EXPENDITURE ON HEALTH AND FAMILY WELFARE AND BIRTH RATES

Level of per capita expenditure on H&FW	No. of states	Name of state	Per capita expenditure on H&FW (Rs.)	Birth Rates			
				1960	1970	1980	1988
High	5	Maharashtra	100.38	41.2	41.0	29.7	29.4
		Rajasthan	79.06	42.7	42.7	40.0	33.3
		Gujarat	70.53	45.7	41.6	39.2	29.5
		Punjab	68.12	44.9	36.9	32.1	28.5
		Kerala	65.59	38.9	37.5	28.7	20.3
Medium	6	Haryana	63.20	44.7	44.5	37.3	33.8
		Tamil Nadu	55.94	34.9	36.8	30.4	22.7
		Karnataka	55.16	41.6	39.9	37.8	28.7
		Madhya Pradesh	52.71	43.2	46.6	39.6	37.0
		Andhra Pradesh	49.46	39.7	39.2	35.9	27.4
		West Bengal	46.60	42.9	44.3	36.4	28.4
Low	3	Orissa	40.07	40.2	41.3	34.6	31.9
		Uttar Pradesh	35.96	41.5	42.5	43.8	37.1
		Bihar	33.56	43.4	41.9	41.9	37.3

Low <45 Medium 45–65 High 65+

The high per capita expenditure states of Maharashtra, Gujarat and Punjab seem to have a moderate birth rate, Kerala has a low birth rate and Rajasthan a high birth rate. The state of Rajasthan, having low per capita income but falling into the category of high per capita expenditure on Health and Family Welfare, needs special investigation.

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Among the medium category of per capita expenditure on Health and Family Welfare, the states of Haryana and Madhya Pradesh have high birth rate, the state of Tamil Nadu has low birth rate and the states of Karnataka, Andhra Pradesh and West Bengal have moderate birth rate.

The third category of low per capita expenditure on Health and Family Welfare states are Orissa, Uttar Pradesh and Bihar. All these three states have low per capita expenditure and high birth rate indicating a weak inverse relationship insignificant at 1% level between expenditure on Health and Family Welfare and birth rate among these states ($r = -.316$).

Summary findings and policy implications

Population growth and socio-economic developmental factors are directly or indirectly inter-related. Population variables influence developmental variables and in turn also get influenced by them. An attempt has been made to visualise the inter-relationship between population growth trends in terms of birth rates and socio-economic development factors in 14 major states of India in the light of recent population results of the 1991 census.

Out of the various socio-economic indicators, seven indicators have been selected to cover the broad spectrum of the Family Planning Programme, social, economic and health indicators which have been defined each into three levels: (1) high, (2) moderate, and (3) low. These variables have been selected on the assumption that these would be indicative of the general status of the socio-economic developments influencing human behaviour and action and to ascertain their relationship with crude birth rate.

The analysis highlights some unique and paradoxical features of states which are currently either having low birth rates or medium birth rate or high birth rate:

(a) Haryana is in the high birth rate group category. However, it remains second in couple protection rates, second in lowest category for population below poverty line and second highest in per capita income in the country among the 14 major states of India.

(b) Rajasthan like Haryana is also in high birth rate group category with the states of Uttar Pradesh and Bihar. It is worth noting that Rajasthan ranked second on per capita expenditure on Health and Family Welfare during 1986–87 among the 14 major states of India.

(c) Madhya Pradesh, like Rajasthan and Haryana, is also in high birth rate category, with a moderate couple protection rate and moderate expenditure on Health and Family Welfare, in the country.

(d) Maharashtra falls in moderate birth rate category. It is worth noting that the state of Maharashtra ranks fourth in couple protection rate, third highest female literacy rate, third in lowest rank for IMR, third highest in per capita income, and ranks first in per-capita expenditure on Health and Family Welfare among the 14 major states in the country. With all factors favouring for having low birth rate, the state's

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birth rate is stagnating around 30 since the 1980's. This needs to be investigated by policy-makers and administrators.

(e) The state of Tamil Nadu is in low birth rate category. It has moderate decline in IMR, medium population below poverty line, medium per capita income and medium expenditure on Health and Family Welfare in the country.

(f) Kerala, Bihar and Uttar Pradesh have indicated consistency in the expected levels of variables considered in the analysis.

The analysis of these socio-economic variables suggests the following directives for policy-makers' consideration:

- The states of Bihar, Rajasthan, Uttar Pradesh and West Bengal belong to the group of the lowest family planning programme performance in terms of couples effectively protected as on 1.3.1989. Except West Bengal all the other states continue to have high birth rate. Therefore, there is an urgent need to improve the programme implementation strategy in these states—Uttar Pradesh, Bihar and Rajasthan.

- The states of Punjab, Haryana and Maharashtra had couple protection rates of 69.6, 59.4 and 55.1 respectively. In the states of Punjab and Haryana, the birth rates have not come down to expected level, while in Maharashtra, the birth rate is stagnating around 30 since 1980's. So there is need to have special studies in these states as to ascertain why the

TABLE 12
CORRELATION BETWEEN BIRTH RATE AND SELECTED VARIABLES IN 14 MAJOR STATES OF INDIA

Variables	Correlation coefficient with birth rate (1981–88)	Level of significance
I. *Programme*		
(i) Family planning performance 1988–89 (average couples effectively protected)	–.48899	Significant at 1%level
(ii) Per-capita expenditure on health and family planning	–.31620	Not significant
II. *Social*		
(i) Female literacy rate 1991	–.80597	Significant at 1% level
(ii) Mean age at Marriage 1988	–.56939	Significant at 1% level
III. *Economic*		
(i) Per-capita income at current prices	–.24843	Not significant
(ii) Population below poverty line	–.37437	Not signficant
IV. *Health related*		
(i) Infant Mortality rate	–.82692	Significant at 1% level

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birth rates have not come down in spite of having highest performance in couple protection rate in the country.

- Education has significant inverse relationship with birth rate. The states in general with high literacy (50 per cent and above) show low birth rate while states with moderate literacy rate (30–50%) have moderate birth rate. The states with low literacy rate have a high birth rate. So education of females has played an important role in reduction of birth rate in the country and hence there is need to encourage more female literacy by providing free education at least upto senior secondary level in the country.

- A strong inverse relationship between female age at marriage and birth rate is observed indicating that higher age at marriage leads to low birth rate. The contribution of age at marriage in reduction of fertility levels has been estimated to be about 17.4 per cent in 1985. So, there is need to enforce marriage laws strictly which are still being violated on a massive scale. It should be made obligatory for a couple to register their marriage.

- Infant mortality rate studied as an indicator of health showed highly positive correlationship between IMR and birth rates. The states which have high IMR have also high birth rate and vice-versa. So there is need to improve the provision of MCH services, especially in rural and urban slum areas in the country.

- Incidentally the suggested directives emerging out of the factual analysis of recent data from 1991 census and available socio-economic statistics are in conformity with the approaches brought out in the Eighth Plan for fertility moderation.

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BOOK REVIEWS

THE PHILOSOPHY OF SARVODAYA

By K.S. BHARATHI,

Published by Indus Publishing Co., New Delhi; pp 164; Price Rs. 160.

Reviewed by DR. BADAR A. IQBAL, Reader, Dept. of Commerce, Muslim University Aligarh.

A philosophy has always got its own place in building a society or a nation. Its role and contribution has far reaching effects on the masses of a country. In India's development as a nation or a society we have been experiencing a lot of impact of Gandhism or Gandhi's ideas.

The book under review is a good attempt on the part of the author for developing a better and indepth understanding on the philosophy of Sarvodaya. It contains nine small but well written chapters along with a bibliography and an index.

The basic theme of the study is to bring to the people or readers not only a new understanding of Gandhi based on scientific research and knowledge but of the world we live in today. It basically gives a positive perspective on Gandhian thought and its implications in a comprehensive manner.

The study highlights the concepts and ideolgy, strategies and methodologies which have been developed adequately for developing better understanding towards Gandhian ideals for rapid development of a nation or a society.

In a small preface the author has rightly pointed out that "Gandhi did not find much time to attempt a comprehensive treatise like Marx's *Das Kapital* in order to formulate a profound philosophical system. He was a practical man (karmayogi). Being an evolving personality, he never claimed finality for his conclusions. Indeed his speeches and writings are integral parts of the composite and consistent whole Sarvodaya social order."

The study covers political, social and economic ideas of Sarvodaya. In regard to political order the author has given much emphasis on the concept of consensus and democracy at village council or gram panchayat. On social order horizon, the Gandhian idea of equality and social justice to all have been discussed adequately. In regard to economic area, the Gandhian concept seeks to resolve the conflicts that exist between the various interests.

The author opines that "Sarvodaya is a new philosophy which strives to include the aspect of social justice as in the Marxian philosophy and the element

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of individual initiative as in the free enterprising capitalist philosophy and is a move upward from these two, its dynamic basis being that there can be no dichotomy between the means and the end in it as all wrong or violent means are eschewed."

However, the study does not cover all the aspects of sarvodaya philosophy. The author himself admits this deficiency and points out that "Due to its futuristic nature, it is not easy or possibble to bring all its aspects in one book". However, the author has tried his best to bring to light the fairly comprehensive picture of Sarvodaya philosophy for the readers and for those who want to know much more about the Gandhian ideals of life and prosperity.

On the whole the book gives the message that Gandhi wanted to convey to the world in a most logical manner and also adequately. It also provides a basis for further research in the various segments of Gandhi philosophy.

DARJEELING: A FAVOURED RETREAT

By JAHAR SEEN

Published by Indus Publishing Co. New Delhi; Price Rs. 120.

Reviewed by DR. BADAR A. IQBAL, Reader, Dept. of Commerce, Muslim University Aligarh.

Darjeeling has not only been famous for its beautiful surroundings within the country but also outside the geographical boundaries of India. It is a store-house of nature's gift in the form of hilly tracks and beautiful sight seeing.

The book under review gives a synoptic view of Darjeeling district which is one of the examples of transformation from delusion of traditional to disillusion of modernity. It contains only four small chapters along with a select bibliography and an index. It also contains five appendices.

The central theme of the book is to describe the historical perspective along with cultural pattern of people living in the district of Darjeeling and gives a multi-dimensional view in regard to different facets of historical and cultural life of the district.

The book takes start from a caption "a favoured retreat" which narrates the evolution of the area so called Darjeeling. It gives evolution right from 1774. Since 1860 onwards, there has been rapid growth and development in the district of Darjeeling.

Chapter II deals with entrepot trade. Under this caption the study brings to light the gains from Nepal, Tibet, Sikkim and Bhutan in relation to the movement of commodities i.e. import and export goods between Darjeeling and these nations. It also discusses certain specific gains to Nepal, India and Britain.

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The third aspect of the study concentrates on strategic considerations which were of vital importance for adjacent countries in South Asia. It reviews adequate literature relating to strategic considerations. The citations are really worth reading.

The last i.e. the fourth chapter deals with the new reorientation of Darjeeling and its future importance to surrounding countries namely, Nepal, Bhutan, Tibet, and other areas.

On the whole the book is descriptive in nature and character. It does not provide any analytical insight into the subject. However, it would serve the purpose for those who want to know the evolution of Darjeeling and its significance to different surrounding nations and other areas. The unique feature of the study has been its dependence on primary sources for different historical events and cultural background.

PULSES IN INDIA

By V. S. SATYAPRIYA; Oxford & IBH Publishing Co., New Delhi, 1989.

Reviewed by S. SHIVA RAMU, Professor, Indian Institute of Management, Bangalore.

The book under review is one of the few studies dealing with demand and supply for pulses in India. The author starts with statistics about the total output of cereals and pulses in India from 1950–51 to 1986–87. On this basis he has tried to analyse the stagnation in the production of pulses and corresponding decline in per capita consumption of pulses. In 1968 ICMR recommended about 70 gms. per capita per day and in 1980 this was revised to 40 gms. Even assuming that it is sufficient, the author finds that there is a "wide gap between the physiological needs and the agricultural possibilities as far as pulses are concerned."

The author tries to correlate the consumption of pulses per person per annum using 15th and 25th round of NSS data for 1959–60 and 1970–71. He tries to fit the demand function equation and finds that there is a significant expenditure elasticity coefficient. He concludes: "That is, the consumption of cereals is achieved at the expense of pulse consumption." Two sets of regresions (constant prices and current prices) appear—the prices of pulses and total expenditure as significant explanatory variables. The author feels that higher cereal prices have led to a cut in the consumption of pulses instead of leading to higher consumption of pulses.

Reviewing the changes in the production of pulses, he has done regional distribution of production of pulses—state-wise contribution to the growth of

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pulses, inter-state and inter-temporal variations. Different regions show different trends. While there is an increase in Orissa and Rajasthan, there is negative growth in Andhra Pradesh and Bihar. Though there is an increase of 30 per cent in the production of pulses in India between 1950 and 1983, the analysis indicates that there was an increase between 1950 and 1965 by about 31 per cent and subsequently there was a decline of 1.5 per cent during 1967 and 1983. However, the author tries to analyse pre- and post-Green Revolution. This indicates that during pre-Green Revolution there was a positive growth and in the post-Green Revolution there was a negative growth, particularly in Bihar, Uttar Pradesh and Punjab. On the basis of production data, the author concludes that the production of pulses was not commensurate with the production of cereals due to a technological break-through in the production of cereals.

The author tries to identify the independent variables such as prices of pulses and their substitutes, yields of pulses, gross irrigated area and one period lagged area. The author gives OLS estimates for different pulses as well as different states. The own yield gap variable was positive and significant only in Uttar Pradesh. With this the author indicates that yield differences together with irrigation extension help in the understanding of slow growth in supply of pulses. There was a positive and significant coefficient for the lagged area. This indicated the existence of habit persistence. However, the author concludes, "The present orientation towards pulse crop as a 'catch' and 'non-market' orientation crop needs to be dispensed with."

The author has tried to organise the data and diagnose the problems of supply and demand situation of pulses in India. After going through the book the reader may require few clarifications:

— The author assumes that the physiological need is equivalent to the demand for pulses. In any marketing situation physiological need is only treated as a potential need. Subsequently it will filter down the felt need depending on the culture and potential demand on the prevailing economic conditions. Only on this potential can it be converted to effective demand for any product. Given these variations, whether one can choose potential need on physiological need basis (like ICMR prescription of minimum requirement on pulses per capita per day) requires to be analysed before deciding the demand level. If one considers that, the author need not be surprised about the behaviour of consumption pattern in India for pulses. Besides, as the author himself has identified, there is a skewed distribution of per capita consumption of pulses that is high income group will spend more on pulses than lower income group. Perhaps this may require a little more classification.

— Assuming the skewness of the consumption pattern, the consumption of pulses, the author should have considered the total expenditure on food items and the proportion of food items on pulses among different class groups instead of taking the total pulses and getting percentage according to expenditure class as given on pages 17 and 19.

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—In case the author has tentatively reviewed all the data, he would see that there is a cross elasticity between pulses and cereals. It would have been appropriate to calculate cross elasticity instead of just prices of cereals and prices of pulses.

—There are a few minor suggestions: the author could have given the diagrams with the text and tables in the annexure.

Though the diagnostic analysis is commendable, the author falls short of proper perspective of prescription to rectify the negative trend of pulses in Indian conditions.

The author has done an excellent analysis with statistical rigour. He has been successful in highlighting the status and trend of pulses in India.

The book is recommended for researchers in agricultural economics and policy-makers.

TECHNOLOGY, ECONOMIES OF SCALE, AND GAINS FROM TRADE AND FACTOR MOBILITY: An Empirical Study of Indo-US Comparative Advantage in Trade

By SHAM L. BHATIA; Carlton Press, Inc., New York, 1984.

Reviewed by S. SHIVA RAMU, Professor, Indian Institute of Management, Bangalore.

The book under review is a dissertation written by Sham L. Bhatia. It is a well researched study in analysing the potential gains in real income to be derived from international trade in product and factor services. The book attempts to develop models which can explain the trade between India and USA. Several trade theories have been developed since Ricardo (1817), Heckscher (1919), Ohlin (1933) and Linder (1961). The classical theory of comparative cost explained international trade on the basis of price variation and quality of labour force. This was changed by modern theory of trade on the basis of endowment of productive resources among different countries. Modern theory was mostly validated by intuition.

Heckscher-Ohlin assumed several conditions. Subsequent developments incorporated demand conditions dictated by technological superiority (Linder), economies of scale (Dreze and Hufbauer) and later trade and investment theories were combined by Travis. The first attempt to derive the Heckscher-Ohlin model by empirical test was done by Wassily Leontief (1953) using input-output matrix disaggregated into 192 commodity sectors of 1947 US economy which indicated that US exports labour-intensive goods and imports capital-intensive goods. This was in contradiction to the expectation of

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Heckscher-Ohlin model. One of the explanations for this paradox was the technological difference which was not incorporated in the test. An alternative model was developed to explain the Leontief paradox in modifying the assumptions of role of demand conditions, capital mobility, tariff and non-tariff barriers to trade. This hypothesis developed by Trevis was able to interpret the Leontief paradox indicating that the relative factor proportions and the technological differences together determined comparative advantage, not one of them by itself.

Bhatia adopts the Trevis model which tries to integrate the theory of comparative advantage, both factor proportions and technology, into a single framework. It avoids the assumption of homotheticity and identity of consumer tastes. Trevis incorporates internationally mobile direct services of capital and labour in explaining factor price equalization theorem. On the basis of this framework Bhatia tries to empirically test three policies of foreign trade and investment, viz., trade policy I which deals with trading factor services only; trade policy II which is concerned with trade in goods only; and trade policy III which deals with trade in both factor services and products. He further elaborates theoretical framework under these three alternative policy frameworks. With the theoretical framework he generates five hypotheses to test empirically.

— Hypothesis I: The complementarity of human capital with physical capital or unskilled labor
— Hypothesis II: The presence of economies of scale
— Hypothesis III: The Heckscher-Ohlin hypothesis
— Hypothesis IV: Neo-Heckscher-Ohlin hypothesis
— Hypothesis V: The Ricardian hypothesis

In testing the above hypotheses he tries to use CES production functions of the countries involved. The data used are: US and India of manufacturing sector of 1966 as some of the cross-sectional data was available for that year. While using the data, he had three empirical problems, viz., operational definition for each factor, completeness of the factor measurement and adequate degree of comparability. For purposes of operational definition of factor, he included capital as an asset (machinery, building, skill etc.). For the second problem of factor completeness, the quantifiable factors of production were considered. For comparability problem, he has tried to identify homogeneous capital equipments among industries. With this he has identified 29 industries for Indo-American concordance. He has used alternative measurements to analyse, such as linear regression for economies of scale, neutral efficiency coefficients and other production parameters for comparable industries in India and the US. The empirical testing and the gain accruing from trade and factor mobility is given. With this empirical test he concludes that Indo-US case study reveals that "the trade in factor services is far more efficient than trade in products."

If either US or India were to maximise their income then their concentration would vary. US should concentrate on development of human capital, R&D

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related to capital-intensive activities; India should concentrate on development of human capital, R&D activities and import of physical capital services.

The main conclusion of the study is that there is a strong complementarity relation between physical and human capital, both in India and US. The economies of scale are statistically insignificant in both countries. The gains from trading products were small. The gains from factor service mobility across countries were large in the Indo-US example.

The author gives several tables for alternative testing of the hypotheses. The appendix gives both algebraic as well as graphic presentation of the gains from trade under various assumptions.

This is an excellent academic work which is recommended to all the researchers who are interested in international trade and investment.

STATUS OF WOMEN AND ACCEPTANCE OF FAMILY PLANNING IN AN UNORGANISED SECTOR (A Study of Beedi-Making Women)

by R.P. SINGH and USHA SAXENA, Population Research Centre, Lucknow (UP), 1990.

Reviewed by RAMESH KANBARGI, ISEC, Bangalore-72.

The brief report is based on a survey of 180 couples involved in Beedi-rolling activity in Varanasi city in U.P. Data on socio-economic demographic characteristics of the couples are collected through a pre-tested questionnaire. The main objective of the study was to assess the status of the women involved in Beedi rolling and examine its impact on their contraceptive behaviour.

The findings show that most of these predominantly Hindu women and their husbands were illiterates having low-paid jobs with an average income of about Rs. 260 per month. They had married very young and at the time of the survey more than half of them were having five or more children though only about half of them were surviving. Son preference among these women was found to be very strong—87 per cent of them desired to have at least two sons. Poor living and large number of children is reflected in poor schooling among children. Though most of the women were young and fecund, only about 14 per cent of them had undergone sterilisation and another about 5 per cent were using other contraceptive methods. Most of their deliveries were conducted at home and they rarely used immunization services for their infants.

The authors rather than constructing an index of status of women and studying its relation with contraception, have a conceptual model that includes socio-economic-demographic status, status in household provisioning, perception of status within home and community, etc. separately, that has not added

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anything new to the existing knowledge. The study highlights the importance of education particularly of females which would lead to increase in age at marriage and contraception which in turn is likely to reduce fertility levels. But efforts made in this direction in India and many other less developed countries have not met with any great success.

Population Research Centres in India were established to provide insights to the government for effective policy interventions to reduce rapid population growth. But unfortunately most of them have been involved in routine type of studies and have failed. There is a need for innovative approach in understanding fertility behaviour which can give some clues for policy interventions in the desired direction.

THE WORLD ECONOMIC ORDER

By M. SHAGHIL, Cosmos Publications, New Delhi, 1989; pp. 386; price Rs. 350.

Reviewed by DR. S.M. WASEEM, Professor in Commerce, Aligarh Muslim University, Aligarh-202 002.

In his study Shaghil is "mainly concerned with global problems". These he discusses in his own style and presents his scheme of "structuring the world economic order". He also dwells upon ecology, defence, lack of concern of man for man, debt trap, and, of course, politics of commissions, conferences and communiques, and other related matters. His concern for the impending threat of total annihilation being faced by mankind in our contemporary world, makes him remember Hiroshima, saying: "Shocking ! Can man do this to man? It was done; and the criminals got away scot free. Bewildering!" (p. 7). Citing instances where man has been misbehaving with man and nature both, he expresses his faith ". . . in the ingenuity of man and counts on his capacity to reason and adaptation, though his behaviour often borders on the insane and irrational" (p. 9).

Shaghil quotes data and information (mostly outdated) to base his analysis. Outdated for a subject like the world economic order, there is a plethora of information and data available which could be conveniently used by an experienced development economist like Shaghil. He highlights the growing gap between the rich and the poor, the fast growing population with "far reaching political and economic consequences . . . particularly in the case of the third world" (p. 23). While lamenting on man's "ecological irresponsibility", he expresses faith in the UN, saying "a world without the UN would be a much more dangerous place to live" (quoting the Permanent Representative of Zambia in the UN).

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Referring to slogans, Shaghil says: "Concepts such as 'might is right', 'survival of the fittest', 'the greatest good of the greatest number', 'laissez faire', 'the hidden hand', 'free play of market forces', 'the magic of private property turns sand into gold' (to which one may add, 'and throws dust into your eyes', 'the economic man', and more recent cliches like 'what is good for General Motors is good for the country (USA)', 'your bank balance is your best friend' (though very true under present conditions), etc., and the latest one attributed to the Chief UN Delegate at the UN World Population Conference (1984), namely, 'free enterprise is the best contraceptive' are distinctly misleading, anti-people and retrograde and need to be cast aside as trash" (pp. 306–7). While going through his words one can identify him as one having distrust in the private enterprise; though on slogans, misleading in nature, he is right.

None would dispute with him when Shaghil says: As a matter of fact the emerging social pattern is the world community. Herein the solutions to 'man-nature' and 'man-man' problems are to be identified and resolved globally in the combined interest of all nations, small and big, as also the present and future generations, in order to ensure the survival and welfare of the human race" (p. 9). Hence the "only hope of a break-through lies in a concerted global approach" (p. 21).

But, his assigning a big role to all nations including those in the third world equally is also unrealistic, as he himself has said on page 37, "Would their intervention be really effective, particularly when all of them, in various degrees, have joined the armament race, out of their own volition, or under pressure from some 'Big Brother'? Even some non-nuclear nations are aspiring to become nuclear" (p. 37). Identifying the influence of the 'Big Brothers' and then saying: It is also not sufficient that they operate as a single group in political and economic debates and negotiations at the international level, vis-a-vis the developed countries", and that "it is more important that they bring to bear the weight of their joint deliberations on problems—political, economic and social—that arise from their dealings with one another. They must endeavour to sort them out", is too simple an analysis unless he spells from where 'the groups of experts' will be drawn, from the less-developed world itself or from the advanced nations of this strife-ridden world?

Several of his suggestions and statements concerning Warsaw Pact, and the Soviet Union and its Super Power role (though on thin ground even in the late 80s when the book was written) have lost validity in view of the sweeping changes taking place in the world order. As regards UN, suffice it to say that it is different when a super power is actively involved!

Referring to the enormous world defence expenditure, Shaghil estimates it to run up in the remaining period of the twentieth century to "an unbelieveable 15 trillion dollars at current prices", and adds (that) it is now "not as employment oriented", as it used to be earlier. He fillips his argument by quoting Fidel Castro: "The absurd rationale which would seek to secure greater security by

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launching this gigantic arms programme, and the commensurate reaction it would entail, have paradoxically led the world to the moment of greatest peril, least security and most fragile stability in history and have forced mankind to face the actual possibility of its total and final destruction" (p. 73).

In Chapter 5 on Mass Poverty and Destitution Shaghil quotes data (again mostly outdated) on population, health, hunger and poverty, etc., to explain the helpless situation being faced by the developing world as regards, income, wealth, and employment-generation.

If Shaghil's scheme in terms of global planning is implemented ". . it would be more appropriate to utilise those areas for food production fully which have the potential to provide higher yields". He qualifies his statement by adding: "Areas in which the ecological balance has been reasonably well maintained and where geographically favourable factors, including technology, already exist, should be explored on a priority basis rather than over exerting to develop the less suited areas at heavy costs over a protracted period of time" (p. 101). This reviewer is sure that in attempting this scheme, Shaghil will encourage division of labour afresh (of which he is highly sceptical at least). Moreover, his scheme will bring a more vulnerable interdependence, fragile and glass-like.

Shaghil, in giving an alternative to the present day world order, criticises the division of labour as at present and its harmful impact (but relies upon "genuine division of labour"). He is equally critical of the monetised economy (but suggests reforms of the world monetary arrangements). He criticises international exchange mechanism and the use of different national currencies, but quotes from the writings of Keynes, Triffin, Gesel, and others in search of an 'International Currency' (ICs) which he advocates in his own scheme too swiftly, forgetting that he has just mentioned about Keynes, 'Bancor'.

Shaghil highlights the skewed distribution of income and wealth and, of course, the opportunity distribution to the disadvantage of the developing countries; and the meagreness of aid and a languishing trade under the evil shadow of protectionism, particularly at the hands of the developed nations, USA, for example. To help solve the problems being faced by the whole of mankind, he suggests a dialogue for ". . . establishing a cooperative relationship between the so-called 'North' and 'South'. " In his desire to see a happy world he opines: "World production has to be planned to meet global consumption needs; production tasks allocated to selected production centres and the required factoral facilities provided in a planned and coordinated manner . . ." (p. 147). Prior to this, he suggests a world resources survey by national and multinational agencies under international supervision. Whether in his scheme of things the third world can play an effective role, is not so clear? And, if so, the world will continue to be plagued by the evil effects of ignorance, poverty, disease and hunger, particularly by the time lag involved in the identification, the specialisation and the actual production, and the continued ignorance of the less privileged and the backward.

While criticising the use of money, Shaghil argues: "With the introduction

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of money, the constraints of barter were not completely removed." If so, how can one believe that an economy sans money (as already tried in human history), will enjoy all the advantages of man's economic activities with equity and justice fully well and in adequate measure, to the fullest satisfaction, at higher ladders of adequacy.

In Chapter 10 on the New Economic Order: Non-Monetised Economy, he unfolds his centrally planned scheme of an internationally controlled world order wherein he suggests the issue of 'entitlement cards' and 'coupons'.

These he prefers to the payments in money, already described evil by him. At the international level, the surplus countries will be required to exchange their output with each other, depending upon the assessments of a 'minimum level' requirement and, of course, 'extras' by way of incentives and rewards. Any surplus (the world surplus) can then be stored for the rainy day. His simple version does not make mention of the unit values and thus of the exchange ratios. The basic question is who will supervise and arrange for the transfers, sitting in his suggested International Commodity Exchange (and its Advisory Council, for that matter)—the representatives from the nations, poor and the needy, the less-educated and poorly trained, having comparatively less expertise, or those having access to modern gadgets and resources and opportunity, having high understanding of the pulls and pushes, knowing fully well how to mislead, exploit and dazzle the world? Or, we shall lay down the structure and the sub-structure in our scheme and wait for the day when the more informed will become equal to those who, from their cradle to their graves, pass each day longing for a tomorrow beautiful, more secure and all-opening so that they too can rub their shoulders with those who are managing them, bossing over them and often exploiting them as well. Or, wait for that golden day when all will be at par in their education, training, wisdom and practice?

It may therefore be said that it was expected from a person like Shaghil's experience and training to suggest reforms of the world order far reaching in effect and really practical and constructive so that the systems and institutions in our contemporary world could be geared to the attainment of human goals sans exploitation of man by man, for today persons like Shaghil are feeling suffocated and crucified each day for the tears that are rolling down the innocent cheeks particularly in the poor and the underprivileged part of the world with no or little fault of theirs. This reviewer has this much expectation from him, for he was wide experience as a former UN development expert. He makes no reference of the on-going Uruguay round of talks.

Nevertheless, the book incites its reader to think on a more pratical plan at this jucture of human history when barriers dividing mankind are being pulled down and wave of freedom with democracy is sweeping the world; Whether this too particulary in the Eastern part of the world will be sustained is a question to be pondered over the line with the poet: The old changeth yielding place to the new: Lest the new should become corrupt.

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BEYOND BRADY: THE STRUCTURE OF AN EFFICIENT SOLUTION TO PERIPHERY DEBTS

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The speech delivered by Treasury Secretary Nicholas Brady on 10 March 1989, somewhat flatteringly often called a "plan", marked an important shift in U.S. debt policy. While Brady's proposal called for debt reduction it had been Washington's officially declared policy before to insist that all debts of Peripheral Countries (PCs) must eventually be repaid. This previous approach of the former Treasury Secretary James Baker was put aside when its author left the Treasury to become Secretary of State, a position where—in the opinion of *Time* magazine of 20 February 1989—his holdings in Chemical New York Corp., a bank significantly exposed in the South, posed a potential conflict to debt initiatives.

Already before Brady's official statement debt reduction had been tolerated and even helped inofficially by the Treasury. Opposition against the initiative by the French President F. Mitterand to reduce the debt burden of poor African countries was eventually overcome at the Toronto summit, and the U.S. Treasury itself backed a deal with Mexico's creditors which involved a reduction of the principal owed by the country. Even if the outcome was more than modest, and interest rate increases eroded this result already during the same year (cf. Navarrete, 1988, p. 5), this first Mexican deal was an implicit recognition by the U.S. administration that the "Baker Plan" did not work.

By recognising the necessity of debt reduction Brady's initiative is an important first step towards a viable solution. Suffering from severe shortcomings this approach is, on the other hand, no way out of the debt problem. This paper is going to discuss the shortcomings of Brady's initiative, focussing in particular on its two main elements: voluntary debt reduction by commercial banks and public guarantees via International Financial Institutions (IFIs). In addition the structure of an efficient and fair solution to periphery indebtment is presented.

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II

A *voluntary reduction* of "both debt and debt service" (Brady, 1989, p. 3) by commercial banks is essential to the Brady Initiative: "The path towards greater creditworthiness and a return to the markets for many debtor countries needs to involve debt reduction" (*ibid*). The question whether debt reduction on a voluntary base is a workable proposal is therefore decisive.

Free riding is the usual counter-argument: any single bank has a powerful incentive not to participate in voluntary debt reductions. If all other banks reduce their claims a free rider can reap maximum gains. It would still be entitled to interest payments on the whole initial face value, while banks that have reduced their claims voluntarily have reduced their interest earnings as well. If relief measures are successful, viz. the debtor economy becomes again able to service its (remaining) debts correctly, hardliners are rewarded for letting others make concessions. The foreseeable outcome of this situation is that no bank reduces its claims, especially so as possible gains from debt reduction depend on getting rid of the debt overhang, which in turn cannot be brought about by one single bank. Voluntary debt reduction puts commercial banks in a prisoner's dilemma where iterative games and thus possibilities of adopting co-operative strategies are excluded. Banks are, in fact, not willing to follow Brady's proposal. On 24 May Treasury Under-Secretary Mulford warned commercial banks that they might face "a legislated or mandated solution to the problem that may be very much more unpleasant" if they refuse to reduce parts of their loans voluntarily. The first tangible product of the Brady Initiative, the Mexican agreement, was reached under prolonged presssure by the U.S. government.

The problem is aggravated by the nature of the so-called secondary market. If it were a market in the textbook sense its rating would represent the probability of full repayment and the product of face value times secondary market rate (SMR) would be the expected value. Debt reduction can increase the expected value of the claims whenever

$$SMR_0 < SMR_1(1 - DR) \qquad (1)$$

where subscripts (0) and (1) denote SMR before and after debt reduction respectively, DR is the percentage of debt reduction. If, e.g., a reduction of 20 per cent increases SMR from 60 to 80, the new value of the remaining debt is 64. These four units are a real gain, an incentive to banks to follow Brady's proposal. Such gains are possible as long as debt is not reduced by more than the difference between face value and secondary market price. If SMR does not react elastically enough the new value of remaining debts might be smaller than before. In our example SMR_1 μ 75 will not allow gains. Real losses, expressed as changes in secondary market values will always be less than reductions in face values.

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Secondary market prices, occasionally established by phone without a single unit actually sold, reflect sales under duress rather than risks. Sometimes this "market" has been used to rearrange portfolios, but mostly banks wanting to get rid of relatively smaller exposures to opt out of reschedulings sold their loans there at a loss. U.S. bank surveillance was apparently a major factor in the development of secondary markets, where bankers that either lost their nerves or felt squeezed by regulators, liquidity or both, sold their claims. The bulk of debts is not supposed to be sold at these prices. The practice of selling debts officially at face value, settling the difference to the secondary market rate in the form of a fee, is a disincentive for debt relief. Even in the case of debt acquired at 60 cashing 70 cents on the dollar would result in a book loss. Therefore the secondary market as it exists—where debtors are, by the way, generally not allowed to buy their own loans—makes debt reduction more difficult.

The willingness of banks to grant relief is further diminished by the fact that only commercial banks are called upon to support debtors this way. Creditor governments and International Financial Institutions (IFIs), such as the IBRD, will insist on full repayment (Brady, 1989a, p. 3; 1989, p. 4). This inequality of creditors is strongly resented by banks suggesting symmetrical treatment of all creditors.

Contractual constraints for individual bargains between debtors and banks exist. Consequently Brady identified *negative pledge and sharing clauses* as a substantial barrier to debt reduction. The former forbids separate deals with individual banks, viz. it keeps the debtor from working the case-by-case approach on the banks. In the latter clause members of bank consortia forswear making separate deals with the debtor. Brady (1989, p. 3; 1989a, p. 2) therefore proposes a *general waiver* of these clauses for each performing debtor to allow banks willing to negotiate debt reductions to do so. Such waivers covering a period of perhaps three years are expected "to accelerate sharply the pace of debt reduction and pass the benefits directly to the debtor nations" (Brady, 1989, p. 3).

Banks are not likely to agree to a general waiver of these clauses as they protect each bank by keeping debtors from picking banks one by one, starting with the weakest or the bank most eager to get out. Apparently they are also not expected to agree any longer:

> "As regards coercion, the initial suggestion that banks suspend the negative pledge and sharing clauses has now been withdrawn. 'It was a mistake', Treasury Under-Secretary Mulford explained (*The Wall Street Journal*, May 10, 1989). The mistake, presumably, was underestimating the political clout of the banks rather than over-estimating the strengthened bargaining power of the debtors the suspension might have effected'. (Felix/Caskey, 1989, p. 9)

But banks are also expected to pour new money into those debtor countries

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whose debt burden they are just reducing. Occasionally some banks might prefer new money to debt relief in one form or the others in the case of Mexico less banks than expected did so—but it is highly dubious whether substantial debt reduction can be immediately accompanied by an amount of fresh money appropriate to the dimension of PC-debts. Eventually, after economic viability has been restored, banks start lending to insolvent debtors again, but they are usually unwilling to do so as long as trouble persists. Brady's attempt to lure fresh money by "differentiating new from old debt" (Brady, 1989, p. 4) was not enthusiastically received.

The second essential element of Brady's initiative is *financial support by the IMF and the IBRD*. A portion of policy-based loans shuould be set aside to support transactions involving "significant debt reduction" (Brady, 1989a, p. 2). These funds should be made available to collateralise discounted debt-for-bond exchanges, or to replenish foreign exchange reserves following a cash buy-back, once such transactions have been negotiated with commercial banks. In addition, IFIs should offer financial support to collateralise a portion of interest payments for debt or debt service reductions.

This part of the proposal contains two bailouts. First, private banks are bailed out by public institutions. Second, as the U.S. share in both IFIs is smaller than the share of U.S. banks in the debts of probable Brady beneficiaries, it involves also a bailing out of the U.S. at the expense of other countries. Similar ideas of international burden sharing in favour of the U.S. had been voiced on Capitol Hill before. The bill H.R. 1453 introduced in the House of Representatives on 5 March 1987, e.g., demanded a deconcentration of PC-debts "now unnecessarily concentrated in United States commercial bank holdings".

The bank bailout is the carrot. A change in IFI disbursement practices is apparently meant to be the stick: initial disbursement by the IMF and the IBRD should no longer depend on prior completion of full commercial bank financing packages. Approving new lending guidelines last May the executive board of the IMF stated that a loan package to a heavily indebted country could be approved before the completion of a debt reduction agreement with its commercial creditors provided the Fund felt such prompt support to be essential, and negotiations were already started with commercial banks with an agreement expected within reasonable time. The Fund also softened its position on arrears to commercial banks. The board stated that some accumulation of arrears to the banks may have to be tolerated where negotiations continue and the country's financing situation does not allow them to be avoided. The IMF's policy of non-toleration of arrears to offical creditors, e.g. the IBRD, remained unchanged.

The reaction by both IFIs to Brady's wishes was exceptionally quick, but the sums involved are relatively small. Already in April 1989 Barber Conable specified the amount the IBRD was willing to provide in support of Brady's initiative: "upwards of ten billion dollars" over the next three years (IPS, 30

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April 1989). Envisioning equal amounts dedicated to this purpose by the IMF the U.S. administration calculated a total of some 20 to 25 milliard dollars over three years. Compared with the estimated debt burden of $ 1,320 milliard according to the IBRD, or possibily $ 1,600 milliard according to estimates by the German IFO (cf. Strack/Schonherr, 1989) these sums look scarcely sufficient. Early illustrative estimates by the Treasury optimistically presented a $ 70 milliard debt reduction scenario: debts of 39 countries totalling $ 340 milliard might be reduced by 20 per cent (cf. Kampffmeyer 1989, p. 10). To stretch the financial limits of IFIs, Brady has called upon other creditor governments to provide bilateral financial support: countries with current account surpluses—in particular Japan, the FRG, and Taiwan (!)—were asked to bail out the Americans. Apart from the Japanese, who reacted promptly, there was little response so far. Economically there is no reason why surplus countries should use their money to buy someone else's troubles, unless they want to trade this help for U.S. concessions.

The problem of increased IFI exposure is treated in a somewhat contradictory way by Brady. He drew attention to the pressing problem that official creditors have made up the global shortfall in financing:

> "Other pressures also exist . . . Commercial bank exposure to the major debtors since 1985 has declined slightly, while the *exposure of the international institutions has increased sharply.* If this trend were to continue, it could lead to a situation in which the *debt problem would be transferred largely to the international institutions, weakening their financial position."* (Brady, 1989, p.2, stress added)

Two pages later he advocates this very transfer. Therefore Weeks/Claudon (1989, p. 2) judge not without reason that the "plan appears to be little more than a bank insurance scheme". But the connexion with debt relief does not make it popular with banks either.

The increasing share of official creditors in total debts can be shown by more precise figures: claims of private banks *vis-a-vis* the group of 15 heavily indebted countries grew by modest 17%, while official exposure jumped by 107% between 1982 and 1989, bringing the latter's share from 23% to 37% (Kampffmeyer, 1989, p. 33). In 1988 the IBRD complained that concerted lending by banks since 1982 had just been sufficient to refinance around a quarter of interest payments by so-called HICs (Highly Indebted Countries), making the IBRD (1988, p. xxix) "the principal net lender to HICs". This recycling of IFI lending into commercial banks interest payments has been aptly called as "implicit taxpayer's subsidy" by J. Sachs (1988).

Brady wants more of it, advocatiing further socialisations of risks—and probably in the long run losses. Both for debtors and IFIs this is a debatable blessing. Debtors increase the share of money that cannot be as easily

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rescheduled as loans by commercial banks, and their increased exposure may threaten to undermine the financial bases of IFIs unless Brady's ideas are applied to very few countries. To avoid overexposure by IFIs restricting their activities to a handful of countries in which the U.S. takes particular interest seems to be the present strategy. Last year "the U.S. government has apparently informed Brazil that it is ineligible for any Brady-type relief" (Weeks/Claudon, 1989, p. 2) in spite of huge balance of trade surpluses.

Signs that IFIs are likely to face problems in the near future even without Brady's initiative exist: mounting problems with debt service, inverse transfer from PCs to IFIs (cf. Feinberg, 1989), and even a call upon Northern governments to help the IBRD. In a passage on its African Special Programme of Assistance the IBRD (1988, p. xxxvii) asked bilateral donors for money to help finance repayments of IBRD loans by countries now in the IDA-only category. The total amount of debt outstanding was a mere $ 3 milliard and its service could neither be covered by IDA nor by the revenues of these IBRD financed activities. Such facts hardly encourage confidence that global debt relief activities on an appropriate scale could be successfully managed by IFI guarantees.

Like Baker before Brady wants to strengthen IFI supervision of debtors further. Given the fact that IFI supervision has not been able to improve the economic situation of debtor PCs since the beginning of the 1980s, and considering the amount of well founded critique of the management of the debt crisis by the Bretton Woods Twins in recent literature this is a debatable strategy. With regard to Subsaharan Africa the IBRD (1989, p. 4) itself admits the necessity of "a move away from earlier practices"—the question remains who is going to pay for the errors of the past, as well as for those of the future.

Repatriation of flight capital and new *direct investment* are further components of Brady's approach. Brady hopes that "structural adjustment" of the IMF/IBRD type is going to open these two other sources of capital. Here, too, the logic is less than convincing. Devaluations, routinely demanded by IFIs, are a powerful incentive to hold one's asset outside one's country. Before very tangible successes in putting debtor economies on their feet again, substanial influxes of flight capital are very unlikely. Judging from past performance of the programmes forced upon debtors by IFIs such improvements will not ocur during the period envisaged by Brady. Barclays' Jolyon Larkman (undated) thought it necessary to "explode the myth of returning flight capital", asserting that it "only returns once a track record of stable economic management has been established. This will, frankly, take years."

To stop capital flight Brady (1989a, p. 2) proposed "improved techniques" developed by the IMF "for monitoring flight capital to prompt corrective action at an early stage". Measures to fight capital flight are necessary, but little has been done so far to transform Brady's vague advice into action. Like the waiver of equal treatment clauses this seems to be a non-starter although detailed

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proposals how to fight these illegal transactions have been made by a German central banker as early as 1986 (cf. Nölling, 1986).

For similar reasons new direct investments are unlikely to boom. Austerity programmes restrict domestic demand, protectionism restricts export possibilities. Consequently debt-equity-swaps have not exceeded a relatively modest level so far. If effected on a larger scale they would—political resentment against selling the country apart—only postpone balance of payments problems of debtors: once the repatriation of profits starts foreign exchange restrictions make themselves felt again. This effect of direct investment is the same as a grace period. There are further problems of direct investment mentioned in literature—inflationary effects and subsidising investments that would take place anyway. It is interesting to note that Mexico, which introduced debt-equity-swaps in 1986 on a significant scale, suspended its scheme for exactly these reasons in Novermber 1987 (Blackwell/Nocera, 1988). Irrespective of one's opinion on direct investment in general it is not a viable tool to solve a debt crisis.

If nationals or residents are allowed to participate another problem emerges: capital flight gets a premium. It pays to get one's money out of the country first to benefit from the subsidy inherent to debt-equity-swaps. With an amount of $ 2.6 milliard Chile was the biggest converter during 1983–1987, ranking nearly half a milliard before Brazil (Blackwell/Nocera, 1988). It was the first country allowing its own residents to engage in this activity, regulating it by Chapter 18 of the rules set by the central bank. Assuming that the junta and its suppoters are more likely to have the necessary foreign exchange, one may call it another move by the junta to use governmental powers for reaping private profits. The Chilean repartiation of flight capital via debt-equity-swaps is most surprising if we consider that—according to IMF and IBRD data—Chile had experienced no capital flight at all (cf. Pastor, 1990, pp. 2f).

Very much like Baker, Brady stresses stronger growth as vitally important to overcome the debt dilemma. Strictly speaking though, not growth as such but increased foreign exchange revenues are necessary. Export growth to overcome the present foreign exchange squeeze is, however, absolutely impossible on a sufficient scale. Apart from lip service that "open, growing markets within the industrial nations will continue to be an essential foundation for efforts to make progress on the debt problem" (Brady, 1989, p. 5) no help is forthcoming. According to the IBRD (1988, p. xxvi) Northern protection "is costing developing countries considerably more than the amount they receive annually as development assistance". Without tackling the problem of protection the Brady initiative is stillborn.

It is also difficult to see how production could recover as long as present policies are pursued. Obliged to raise money to service their debts governments frequently crowd private investors out of the market. Competing against the real return on dollar securities and capital flight drives real interest rates to levels at which physical investment projects are unable to compete. Felix/Caskey (1989,

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p. 25) mention real interest rates on treasury bills of 15% *per month* in Argentina, and 30 to 50 per cent per annum for Mexico and Brazil. The *Economist* (24 February–2 March 1990) reported recently that 1989 was the best year in memory for Brazil's banks earning up to 43% return on capital. Naturally these gains did not come from private enterprises—which prefer to stay away from banks according to this source—but from the government which was charged 30% *a month* in real terms. As Felix/Caskey (1989, p. 25) observe debtor governments are in a hopeless position: raising the real rate of interest to induce capital repatriation would further deter real investment (and increase the costs of borrowing to the government itself); reducing the rate in order to stimulate investemnt ecnourages capital flight.

Finally Brady proposed changes in regulatory, accounting or tax impediments to debt reduction. So far the Treasury did little to help these changes come about. A decision taken by U.S. tax authorities briefly after Brady had announced his proposals even limited the tax advantages banks get on foreign loan write-offs (cf. Griffith-Jones 1989, p. 2). The problem of risks generated by accounting and regulatory norms is most pressing in the U.S. where money centre banks have provided least—Japan is a special case, where banks have found other ways to tackle this problem. Nevertheless the administration has not tried to bring about the changes recommended by its own Secretary of the Treasury. The model used for agricultural loans in 1987, which allows stretching amortisations of losses over seven years, could, e.g., easily be transferred to PC-debts. A similar stretching was proposed in a bill by Reps. Morrison and Levin for PC-debts in March 1987, but the absolute absence of any Treasury activity to change U.S. regulations contrasts conspicuously with Brady's proposal.

To evaluate Brady's initiative one should also look at the present results in the case of Mexico. Already in 1988, at the IMF/IBRD conference in Berlin, Brady had referred to the necessity of debt reduction. As early as January 1989 the *Financial Times* reported on a plan for Mexican debt restructuring "in the context of the 1985 Baker Plan", containing the main elements of the present deal, including a 40 per cent discount as one of the options and IFI guarantees.

After the agreement of July 1989 with Mexico, hailed as the first Brady Plan deal, *The Wall Street Journal* warned that Mexico's overall debt would probably rise because of the new lending by IFIs and Japan plus the capitalisation of interest on debts owed to the Paris Club. It expected the net decline in annual interest payments to be minimal. Felix/Caskey (1989, p. 10) from whom this source is quoted concluded: "The first test of the Brady Plan reduces the bank debt but not the debt overhang." This conclusion is fully confirmed by the final result: a reduction of bank debts by $ 7 milliard is exactly balanced by increases in debts *vis-a-vis* IFIs and Japan, an effective cash flow relief of less than $ 1 milliard was calculated by banks (*Neue Zurcher Zeitung*, 6 February 1990). Quoting early calculations Andrews (1989) remarked skeptically:

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> "debt relief of less than $ 1.8 billion a year for three years, a pittance compared to the $ 5 billion figure that many economists and debt experts say is the minimum about necessary to make a difference."

The final result of the Mexican deal is below this level of pittance. Furthermore, it suggests that Brady's initiative is not going to be a global solution of the debt problem. Midland's chairman has warned other debtors not to use the Mexican deal as a model for future arrangements (Andrews 1989a), and *The Economist* (13–19 January 1990), commenting on the long higgling and haggling over the Mexican scheme, warned that "Mexico's struggle bodes ill for the debtors next in line for treatment". No positive news have been heard about Costa Rica and the Philippines, two countries that got approval of debt reducing financing packages together with Mexico (IMF Survey, May 29, 1989) and it remains to be seen how much muscle Washington is willing to apply in the future.

The only positive contribution of Brady's initiative to the global debt problem is thus the offical recognition by the U.S. that debt reduction is necessary.

III

The indigestibility of the "menu approach" has stimulated proposals to grant debt relief in one form or another long before Brady. The spectrum of voices is as wide as it can be, ranging from Capitol Hill or the U.S. Department of Agriculture to Fidel Castro, comprising NGOs with or without religious background, people from commercial and central banks, academia and export business. After the U.S. has adopted this view one may presume that the important questions now are "how" and "when", not "whether" the burden will be reduced. Undoubtedly the solution should be fair, economically sound, likely to restore development prospects in debtor countries, and it should abolish those imperfections in international money markets that have contributed to if not produced the present crisis. A fair and viable way of relieving debts and restoring the debtors' abilities to grow and develop without the discouragement of the burden of debts would finally benefit people both in the North and the South. This paper is going to present the basic structure of an alternative to the faltering Brady initiative which is described in more detail elsewhere (Raffer, 1990).

A solution avoiding both the free-rider problem and the problem of socialising risks or costs is the internationalisation of insolvency procedures. In contrast to proposals of internationalising chapter 11 of the U.S. Title 11 (Bankruptcy), which have been made nearly half a decade ago, a solution solving the problem of sovereignty or governmental powers is needed. U.S. bankruptcy laws have successfully solved the legal problem of debtors vested with governmental powers in chapter 9. This chapter regulates the insolvency of

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municipalities, protecting the municipality's governmental powers, and can be adapted to the international problem with minor formal changes. Like all good insolvency laws it combines the need for a general framework with the flexibility necessary to deal fairly with individual debtors.

Chapter 9 solves a problem unique to public borrowers: intrusion into the debtor's governemental power from outside. This problem is solved by § 904, which limits jurisdiction of the court. It states clearly that the court may not interfere with the choices of a municipality as to which services and benefits it will provide to its inhabitants. The jurisdiction of the court depends on the debtor's volition and cannot be extended beyond. Creditors are to receive what can be "reasonably expected" under given circumstances. Debt reductions granted are similar to chapter 11 cases (private firms). The living standards of those living in the insolvent municipality are, of course, duly protected. The plan cannot impose misery and famine on them.

Individuals affected by the plan have a right to be heard and to defend their interests, which appears to be especially useful in the North-South setting. In the U.S. so-called "special taxpayers affected by the plan"—who are special in the sense of being expected to pay higher taxes—as well as employees of the municipality have a right to voice their arguments and to comment on the economic soundness of the plan.

Judging from the reasoning in a relevant court case in the U.S. Chapter 9 could be instantly applied to sovereign debtors. In 1984 the U.S Court of Appeals for the Second Circuit in New York granted U.S. insolvency protection to Costa Rica. The court recalled a Canadian precedent, drew analogies to U.S. laws, stated that Costa Rica's actions were *"consistent with the law* and the policy of the United States" and "in entire harmony with the *spirit of bankruptcy laws* the binding force of which . . . is *recognised by all civilised nations"* (UNCTAD, 1986, p. 142, emph. mine). In 1985, however, after a rehearing the court reversed itself—not because of any flaw in its legal reasoning, but because the U.S. administration had made it clear that their policy was to support the IMF rather than principles recognised by all civilised nations. A simple change in the administration's policy should therefore be sufficient to allow the application of already existing U.S. law to sovereign debtors.

Because impartiality of national courts, whether located in a creditor or debtor country, cannot be guaranteed—as the example above illustrates with utmost clarity—a neutral court of arbitration must be established to allow absolutely fair international chapter 9 proceedings. According to usual practice in international law each side should nominate the same number of persons, who, in turn, elect one chairperson to achieve an uneven number. IFIs controlled by Northern majorities and creditors in their own right, such as the IMF and the IBRD, cannot be considered neutral, but could be nominated by the creditor side. Such a neutral body of arbitration was, by the way, also established in the London Agreement, which reduced Germany's debt burden after the War.

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Like a court in a U.S. Chapter 9 case the arbitrators would have the task of mediating between debtor and creditors, chairing and supporting negotiations by advice, providing adequate possibilities for those affected by the plan to be heard, and—if necessary—deciding what should be done. Agreements betwen debtor and creditors would need their confirmation, in analogy to U.S. law. People affected by the plan could be represented by organisations speaking on their behalf, e.g., trade unions, employees' associations as in the U.S. chapter 9, religious or non-religious NGOs, grassroot organisations, or international organisations such as UNICEF. The arbitrators would have to take particular care that a minimum of human dignity of the poor is guaranteed. The possibility of describng the expected effects on the poor in public would already have mitigating effects, contributing to an adjustment with a human face.

An international Chapter 9 framework should tackle the following problems:.

Assessment of debts: All claims have to be verified loan-by-loan.

Socialised debts: In many countries governments were forced by banks to assume retroactively losses from private lending without any government involvement. Such increases in the debt burden of countries have never met audible protest by IFIs, although they made debt management much more difficult. These socialisations of private losses must be declared null and void.

Capital flight: Both creditor and debtor countries should take measures against capital flight, as proposed by W. Nölling (1986). These measures would be in line with Brady's stated wish. Money obtained by criminal acts, such as corruption, theft, and embezzlement should not be protected by banking secrecy, and should be returned to the victims.

Economic adjustment: Economic reform in problem debtor countries is doubtlessly necessary, but the burden of adjusting should not be shifted entirely on them. In analogy to domestic insolvency debt service must be geared to the debtor's capacity to pay, restoring economic viability while protecting a minimum standard for the poor. In contrast to present practice there must be a trade off between payments and protectionism. The more protectionism creditor countries wish the more relief they must be prepared to grant.

A realistic policy would drop the present predelection for one-sided liberalisation by those countries that are at the mercy of IFIs. It would adjust both by import substitution on a substantial scale, and by using those export possibilities that may exist internationally. Economic diversification must be part and parcel of this kind of adjustment. A policy mix between intervention and market forces is necessary and it would be a task of the arbitrators to prevent protection necessary to establish infant industries from petrifying. The board of arbitrators would have the power to suspend or revoke chapter 9 benefits if the debtor tries to abuse the system by not complying with the agreed plan.

Symmetrical treatment of creditors: In contrast to Brady all creditors,

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public or private, should be treated equally, including IFIs. Multilateral lenders charge interests below the debtor's market rate, which is an argument for preferential treatment. On the other hand, strong supervision and massive influence on their clients' policies down to microeconomic variables are a decisive difference to commercial banks. Deciding must be accompanied by (co-)responsibility—this the most basic condition for a functioning market mechanism. At present IFIs insist on full repayment, even if failures by their staff occur. These costs have to be paid by borrowers. A new loan might be given to correct the damages done by the first, as in Brazil's Polonoreste case (cf. Raffer, 1990; 1990a), leaving the debtor with more debts and the IFI with more interest income. The striking contrast between free-market recommendations given to PCs by IFIs and their own protection from market forces must be abolished. Like any other creditor they should carry the risk of losing part of their claims. At a time when the market becomes increasingly popular in the Soviet Union, there is no reason why it should not be brought to IFIs, allowing them to benefit from efficiency gains.

Banking regulations and tax treatment: At present increased loan loss reserves would enable all banks to absorb substantial relief. Apart from Canada (45%), the U.S. money centres (30%) and the special case of Japan (15%) loan loss reserves averaged 50 or more per cent of periphery debts at the end of 1988. The UK was another exemption but had reached 50% by September 1989 (Griffith-Jones, 1989, p. 7). At the end of 1989 NatWest and Lloyds held provisions of roughly 75%, Barclays was estimated at around 70%, and NatWest trailed behind at roughly 50% (*The Economist,* 24 February–2 March 1990). Japanese banks, whose provisions are limited by regualtory norms, have other possibilities of absorbing cuts such as unrealised security gains which often are a multiple of PC-exposure or a healthy equity/unprovisioned exposure relation. Total unprovisioned Latin debt amounted to one quarter of total equity of leading banks in 1988. By forming JBA Investments to get undesired PC loans off their sheets—with "quite substantial" tax credits too—they have documented that they can manage debt problems very innovatively (cf. Cataquet, 1989).

In contrast U.S. money centres have provided least, a fact often attributed to U.S. tax laws, which grant very limited possibilities of tax deductibility. Apparently this is a lame excuse as U.S. regionals, subject to the same norms, had an average reserve level of 55% in December 1988—nearly double as much as money centres.

Economically provisions have the important function of spreading losses over some years, which might ruin a bank if they had to be absorbed in one year. The costs of tax deductibility to the tax-payer, and hence the benefits to banks, have always been strongly exaggerated. As tax deductible provisions only shift losses (or taxes) over time, postponing taxes and anticipating losses, they are in essence a loan. In Continental Europe this loan carries no

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interest—not only in the case of banks, but for all enterprises. At a tax rate of 40%, and an interest rate of 9% at which the government itself borrows, reserves of $ 100 cost taxpayers $ 3.6 annually. Whether to have a tax system that encourages more prudential provisioning is a political question, which should not be decided without considering the alternatives (cf. Raffer, 1990a). Continental Illinois or the case of S&L in the U.S. may suffice to show that practically no tax deductibility of reserves does not necessarily mean no costs to the taxpayer.

The effects of tax laws are not unambiguous. It can be argued that tax deductible reserves need not be an incentive to reduce debts—as tax benefits were already realised (cf. Griffith-Jones, 1989). Recently built up loan loss reserves in the U.S., however, have certainly not induced North American banks to engage heavily in debt reduction in spite of the possibility to realise tax benefits. Lacking provisions by U.S. banks have, on the other hand, always been quoted as one important reason why debt reduction was impossible, and Continental European banks—which have provisioned more on average—have always been less inimical to the idea of reducing debts. It should be pointed out that the mechanism of compound interest increases the gains of Europeans described above as long as U.S. money centres defer debt reductions.

Regulatory relief could be made available to banks when chapter 9 is applied internationlly for the first time. It might help to bring about reductions sufficient to restore the viability of debtor economies. Alfred Herrhausen's (1989) suggestion not to step over the weakest link in the creditors' chain could be adopted and would make debt reduction more acceptable to banks. His proposal for debt reduction is as follows:

—during a five year period all banks increase their provisions to at least 50%, while the interest rate on already existing debts is reduced in stages to, e.g., 70%, 60%, 50% of its present level (with exceptions, e.g., for trade financing).

—after five years normal market interest rates will be restored, but provisions will be used to reduce claims at once or in stages to, e.g., 70%, 60%, 50%.

—the maturity of remaining loans will generally be fixed at 25 or 30 years with five to seven years of grace.

Table 1 illustrates the effects of this proposal on the 15 HICs. The percentages illustratively mentioned by Herrhausen—70 to 50% would result in quite substantial relief. Regulatory changes to allow realising this policy should be made where necessary.

Contingency clauses changing conditions if particularly favourable developments take place—as suggested by Herrhausen, and part of the Mexican deal—could be agreed on. They could be combined with clauses stipulating additional relief in the case of particularly adverse developments.

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IV

The Brady inititiative is no way out of the debt disaster, but its official recognition that debt reductions are necessarily part and parcel of a viable solution provides a base for more promising proposals. An international chapter 9 would solve the present crisis in an efficient and fair way, is not based on shifting additional risks or losses onto taxpayers, and would prevent future massive misallocations of funds as they happened in the 1970s. Labouring on the theory that countries may get illiquid but cannot get insolvent banks felt invited to urge loans on PCs without obeying the most elementary rules of prudence. If international insolvency had existed in the 1970s, there would probably be no debt crisis now. Debts would certainly be lower, and PCs would not have been forced to socialise bad private loans. The abolition of lenders' privileges would allow the market to work properly. In contrast to present strategies a minimum of human dignity for the poor would be guaranteed. The only prerequisite for this solution is that Northern governments stop protecting commercial banks against the consequences of their own decisions and introduce legal norms considered fair and economically efficient within their own countries into the international system.

TABLE 1

FINANCIAL IMPACT OF INTEREST-RATE AND DEBT RELIEF BETWEEN 10 AND 50% IN THE CASE OF 15 HEAVILY INDEBTED DEVELOPING COUNTRIES (BAKER COUNTRIES)[1]

Countries	Interest-rate relief[2] (in US $ bn.) over 5 years given reductions of					Bank debt relief (in US $ bn.) after 5 years				
	10%	20%	30%	40%	50%	10%	20%	30%	40%	50%
Argentina	2.0	4.1	6.1	8.1	10.2	3.0	6.0	9.0	12.0	15.0
Bolivia	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1
Brazil	4.1	8.3	12.4	16.6	20.7	6.1	12.2	18.3	24.4	30.5
Chile	0.5	1.1	1.6	2.1	2.6	0.8	1.6	2.3	3.1	3.9
Columbia	0.3	0.7	1.0	1.4	1.7	0.5	1.0	1.5	2.0	2.5
Côte d'Ivoire	0.1	0.3	0.4	0.5	0.7	0.2	0.4	0.6	0.8	1.0
Ecuador	0.2	0.4	0.6	0.8	1.0	0.3	0.6	0.9	1.2	1.5
Mexico	4.2	8.4	12.6	16.8	21.0	6.2	12.4	18.6	24.8	31.0
Morocco	0.1	0.2	0.4	0.5	0.6	0.2	0.4	0.5	0.7	0.9
Nigeria	0.3	0.7	1.0	1.4	1.7	0.5	1.0	1.5	2.0	2.5
Peru	0.1	0.3	0.4	0.5	0.7	0.2	0.4	0.6	0.8	1.0
Philippines	0.6	1.3	1.9	2.6	3.2	1.0	1.9	2.9	3.8	4.8
Uruguay	0.1	0.2	0.3	0.4	0.5	0.2	0.3	0.5	0.6	0.8
Venezuela	1.7	3.4	5.1	6.8	8.5	2.5	5.0	7.5	10.0	12.5
Yugoslavia	0.5	1.0	1.4	1.9	2.4	0.7	1.4	2.1	2.8	3.5
15 countries	15.1	30.3	45.4	60.5	75.6	22.3	44.6	66.8	89.1	111.4

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[1]Calculated with reference to medium and long-term uncovered bank debt at the end of 1988. Figures are approximate on the basis of BIS and national satistics.
[2]Given an interest rate of 10% taking compound interest into account.
Source: Herrhausen (1989).

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GLOBAL ENVIRONMENT AND NORTH-SOUTH TRADE

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1. The Environment as a North-South Issue

Why has the global environment emerged as a North-South issue?[2] Why do developing countries specialize in the production and the export of goods which tend to deplete environmental resources such as rainforests? What is the role of international trade in global environmental issues?[3]

The aim of this paper is to propose answers to these questions. It will do so by studying patterns of North-South trade where the North has better-defined property rights for environmental common property resources than does the South. This difference in property rights will be shown to lead to market induced "comparative abundance" of environmental inputs in the South, in the sense that at each market price, the South supplies more environmental resources as inputs of production than does the North (Lemma 1). I study a class of environmental issues arising from the use of environmental resources as

[1]I am grateful to the participants of a seminar on Environment and North-South Trade at Columbia University, April 1991, and to Partha Dasgupta, Geoffrey Heal, Alessandro Vercelli and Wallace Oates for helpful comments. Hospitality and financial support from the Stanford Institute for Theoretical Economics is gratefully acknowledged.

[2]Wide debate focusses on acid rain, global warming and the destruction of rainforests. Recently one hundred nations agreed to consider a treaty to reduce the threat of global warming at Rio de Janeiro, Basil, June 1992. In Vancouver, Chantilly, February 1991 a pact was adopted that establishes a framework for a treaty linking environmental policy to economic issues of interest to industrial and developing countries, such as the remission of international severeign debt and transfer of technology.

[3]W. Baumol and W. Oates (1975), I. Walter (1975), W. Oates (1991), J.A. Tobey (1990) and others have studied the effects that environmental control measures could have on patterns of international trade. Some of these studies have found measurable effects (d'Arge and Kneese (1971)). All these studies focus on the policy aspects of measures to control pollution rather than on our issue: why developing countries specialize in the exports of environmentally intensive goods. The general concern that developing countries develop an advantage in pollution-intensive industries, known as the "pollution heaven hypothesis" has been studied by I. Walter and J. Ugelow (1979) and I. Walter (1982). The potential implication of policy measures to protect the environment on international trade was also studied by Krutilla (1976), Maler (1976, 1990a), Lind (ed.) (1982), Chichilnisky (1982, 1985, 1988b). On the other hand, Dasgupta (1990) points out that the literature on development economics and the environment is largely undeveloped.

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inputs to production (Dasgupta (1990)) of exportable goods. Examples are rainforests used for timber, or destroyed to give way to the production of cash crops. These are common property resources (Baumol and Oates (1975), Dasgupta and Heal (1979)) whose ownership is shared with future generations (Arrow and Fischer (1974)). It is shown that differences in property rights between the two regions leads to a pattern of international trade in which the South specializes in the exports of environmentally intensive goods, and uses environmental inputs beyond what is Pareto efficient. Indeed, we show that international trade could be explained solely by the difference in property rights between the two trading regions (Theorem 1).

The South exports environmentally intensive goods even if it is not relatively rich in environmental resources. Furthermore, even if international trade equalizes the prices of environmental resources across regions, it will still reinforce the tendency of the South to overexploit its environmental resources (Corollary 2). Policy implications are discussed: they involve improving property rights of the local users of the environmental resources. It is argued that such improvements are necessary to put a stop to the social overuse of environmental resources. We discuss policy issues which are complementary with the current North-South environmental negotiations, and which could improve the odds of a better use of global resources.

2. Gains from Trade: Private vs. Social Dimensions

We shall address a class of environmental issues arising from *the use of environmental common property resources as inputs of production.* For example, a tropical forest is a common property resource used as an input to production of timber, palm oil, fish, trapping and fishing. Another example is fossils fuels which are used as inputs of industrial production. Their combustion uses the atmosphere, a common property resource, for disposing of its by-products such as CO_2, and as a source of oxygen. The fact that environmental resources are common property resources leads inevitably to a divergence between private and social costs (Dasgupta (1990), Dasgupta and Heal (1979), Baumol and Oates (1974)). Many of these are renewable resources. They can be "produced" at a cost, up to a point, and used as crucial inputs to production.[4] Overgrazing, overfishing, the depletion of trees and shrubs from common land for use as fuel are familar problems. They are traceable to the 'common property' nature of such resources as grazing land, fisheries and forest cover. So too with the drawing of water from aquifers which by the natture of things must usually be common property even when the land covering the aquifer is privately owned.'"[5]

[4]We deal here with both renewable and non-renewable environmental resources. Dasgupta and Heal (1974, 1979) concentrate on exhausitble resources. Renewable resources with a very slow renewal rate are close to exhaustible resources.
[5]P. Dasgutpa (1990).

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In general common property resources have the characteristic that one person's use interferes with the use by others, and diminishes the productivity of the resource to them. Hence private returns exceed social returns and there is overuse (Dasgupta and Heal (1979)). Because of the divergence between private and social prices, any standard measurement of comparative advantages and of gains from trade will be different if computed in terms of *social* costs than if computed with *private* costs. *Public* and *private gains from trade* will differ.

When the environment is taken seriously, and we have little choice in the matter, the classical theorems on international comparative advantages and gains from trade must be recomputed. We must now account for *public* comparative advantages and for *public* gains from trade. Obviously these could be very different from their private counterparts.[6] We turn now to the formalization of this issue.

3. A General Equilibrium Model of North-South Trade

We shall study public vs. private comparative advantages and gains from trade within general equilibrium model in which the environment enters as an input of production. Environmental resource markets will be shown to reflect and transmit all aspects of the private vs. public dilemmas. Through these markets, environmental inputs have an impact on the general equilibrium of the economy: the market price of goods, the distribution of income and the patterns of consumption and of international trade.

[6]The term "comparative advantage" encompasses two different definitions: one originates in the classical Ricardo (1817) model with one input nof production (labor), the other in the two factor, two good Heckscher-Ohlin model (Ohlin (1933), Jones (1956, 1965). In the former, labor produces goods A and B. Labour requirements per unit of A at Home is a_{LA} and for B is a_{LB} and the same numbers for the Foreign Country are a^*_{LA} and a^*_{LB} respectively. Then Home has a comparative advantage in A if the ratio of the unit requirement in A to that of B is lower at Home than in the foreign country, i.e. $a_{LA}/a_{LB} \leq a^*_{LA}/a^*_{LB}$. In other words, if Home's relative productivity in A is higher than it is in B, Home has a comparative advantage in the production of A.

In the case of a two input two good Heckscher-Ohlin model the relative advantage is measured instead not by the relative productivity of labor in the two sectors of the country (since technologies are typically the same in the two countries) but rather by the relative abundance of the two factors which enter as inputs in the production of the two goods A and B. Here A and B are produced using capital K and labor L. The total sypply of L and K are fixed in each country, e.g. at Home $L = L_0$ and $K = K_0$; in Foreign, $L = L^*_0$ and $K = K^*_0$. Let A be more labor intensive than B in both countries. Then Home has a comparative advantage in the production of A if the ratio $L_0/K_0 \geq L^*_0/K^*_0$. In this case Home will export A and foreign B.

Gains from trade are measured by considering welfare before international trade (in autarky) and after trade (in a world market equilibrium). Typically gains from trade emerge from an expanded choice set, since in autarky the countries consume what they produce, while when trade takes place they consume what they can afford in the budget set which is determined by international prices and what they produce. The latter set is typically larger than the former, because the former is the production possibility set of the country, while the latter is a half space containing the production possibility set.

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The model we consider is a two good, two input, two country model similar to that of Heckscher-Ohlin (Ohlin (1933), Jones (1956, 1965)), and a version of the Arrow-Debreu model. However, in terms of the underlying anlaytical structure there is a major difference. This is that the supplies of inputs, which are capital K and environmental resources E, is price dependent. This means that $P_E = P_E(E)$, where P_E is the price of a unit of the environmental resource E. In this sense the model follows Chichilnisky's North-South model (1981, 1988a) but here the inputs of production are capital and environmental resources, rather than capital and labor.

The model for *one region* is formalized as follows. There are two inputs of production (K, capital, and E, the environmental resource). They are used to produce two goods, A and B; B is more intensive in the use of the environmental resources than A. The production functions are $A = f(K, E)$ and $B = g(K, E)$, both of which are concave and exhibit constant returns to scale. A strictly concave homothetic utility function $U(A, B)$ for goods is postulated; this could be considered the country's "community preference".[7] Initial endowments of E and K are given by the supply functions $p_E = p_E(E)$ and $r = r(K)$, where p_E denotes the private marginal cost of the environmental resource, and r the rental price of capital. Both of these functions are continuous and increasing in their arguments. One of the goods is the numeraire, $P_B = 1$. Since endowments, technologies and preferences are defined, all ingredients of a general equilibrium model have been provided.

Demand is formalized as usual. For each vector of prices $p = (p_E, r, p_A)$ utility $U(A, B)$ is maximized subject to a budget constraint: the value of consumption of A and B cannot exceed the value of initial endowments. Under appropriate concavity assumptions, this yields an *aggregate demand* vector for commodities denoted (D_A, D_B), and a demand vector for inputs denoted (D_K, D_E), for each price vector p. Formally:

$$(D_A, D_B, D_K, D_E) = D(p_A, r, p_E) \tag{1}$$

Supply is formalized as follows. At each price vector $p = (p_E, r, p_A)$ a quantity of inputs and commodities is supplied according to the supply functions $p = p_E(E)$ and $r = r(K)$. The producers of goods A and B use these inputs efficiently, and so that all available capital and environmental resources are employed. This determines the quantity of A and B produced,[8] denoted $(S_A, S_B) = S(p_E, r, p_A)$.

The *excess demand function* of the economy is therefore $\phi(p_A, r, p_E)$

[7]This has the advantage of avoiding problems of aggregation. Chichilnisky and Heal (1983) established necessary and suficient conditions on individual preferences for the existence of a well defined community preference.

[8]This gives the quantities of goods A and B produced by profit maximizing producers, when both factor markets clear. Note that as is standard in constant returns economies there may be no well defined partial equilibrium supply function for each producer without the additional assumption of full employment of factors.

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$= D(p_A, r, p_E) - S(p_A, r, p_E)$. Because the budget constraint is satisfied, Walras Law is too: the value of excess demand equals zero:

$$p_A(D_A - f(K, E)) + (D_B - g(K, E)) + r \cdot K(r) + p_E E(p_E) = 0.^9 \quad (2)$$

A *one region equilibrium* is a price vector p* at which each of the four markets clears[10] i.e. $p^* = \phi^{-1}(0)$ *or* $p^* \in \{\phi^{-1}(0)\}$. This is a standard definition of a market equilibrium in a competitive market economy.

The *two region model (North-South general equilibrium model)* is constructed as usual by considering two one-region models together, and relaxing the hypothesis that each commodity market (for goods A and B) clears in each region, so as to allow trade between the regions. Input markets clear in each country because factors (K and E) are immobile, i.e. not traded internationally. For the same reason, in a world equilibrium the prices of these inputs may be different in the two countries.[11]

The two regions are assumed to be identical in most respects: same technologies, same inputs and produced goods, same utilities and the same supply function for capital. The only difference between the regions is in the property rights which will lead in turn to different supply functions for the environmental common property resource[12] E, to which we now turn.

We shall consider *two* types of supply curves for the environmental common property resource: one is the *private supply curve*, derived from the private marginal cost curve of using or extracting the resource, the other the *social supply curve* derived from the social marginal cost of use or extraction, and which takes account of the negative externalities that one user has on others. This is formalized in the following section, where we show that $\forall E$, $p_E^{\pi}(E) < p_E^{\sigma}(E)$.[13] Equivalently, at each market price the private supply curve[14] $E^{\pi}(p_E)$ privides more E than the social supply curve $E^{\sigma}(p_E)$ does. In the model we shall consider one supply curve for the North, its social supply curve, and two for the South, both the social and the private supply curves. This is because we shall assume that property rights for environmental common resources in the North are sufficiently good that most social costs are internalized. The North's

[9] The value of the environmental inputs $p_E \cdot E(p_E)$ equals the cost of extraction. When the private cost is considered, and no social costs are incorporated, this will generally overstate national income.

[10] Because Walras Law is satisfied, it suffices that all but one markets clear; with non-zero prices, the last market will clear automatically.

[11] Effectively the factor markets in each country are different markets under this assumption and achieve different prices in an equilibrium. This is a standard specification. Under certain conditions, discussed in the last section, factor prices will equalize across the two regions even though the factors, K and E, are not traded.

[12] This assumption is made to emphasize the patterns of trade which are due to differences in property rights between the two regions. This assumption can be relaxed/weakened to consider different technologies and preferences across the regions. (See Chichilnisky (1988a)).

[13] The superscript π denotes "private" and the superscript σ denotes "social".

[14] $E^{\pi}(p_E)$ is the inverse function of $p_E^{\pi}(E)$; it is assumed to exist and to be continuous.

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social and private curves are therefore very close, and we assume they are equal. On the other hand, we shall argue that in the South such property rights are not well defined, so that the private and social curves are quite different. This derives from the lack of property rights in the South, and is substantiated in the next section. Using the two different curves in the South, private and social, leads to different concepts of comparative advantages and of gains from trade.

Region S is said to have *comparative advantage* in the production of good B, which is intensive in the use of the input E, when for each price p_E the supply of E in region S is larger than the corresponding supply in region N at the same price. Obviously this definition requires that we specify which supply curve is used: We shall differentiate between public and private comparative advantages as follows. *Private comparative advantage* in region S is defined by using the private supply curve for E in the South; *public comparative advantage* is defined by using the social supply curve for E. As we shall see in the following section, when property rights are less developed in the South, the South will exhibit a private comparative advantage in the production of B, even though it has no public comparative advantage.

Different supply curves will also give rise to different *production possibility* sets. Consider at each price vector p the quantity of E supplied according to the private supply curve $E = E^{\pi}(p_E)$, and the corresponding quantity of $K = K(r)$. With these two quantities of E and K we may compute the set of all possible combinations of outputs A and B which are feasible using the production functions F and g. This set is denoted $PP^{\pi}(p)$. Taking the union for all p, we obtain the *private production possibility set* $PPS^{\pi} = \cup_p PP^{\pi}(p)$, which we assume to be convex. Performing the same procedure, but using the social supply curve $E = E^{\sigma}(p_E)$, yields the *public production possibility set* $PPS^{\sigma} = \cup_p PP^{\sigma}(p)$, which is also convex.

At the *world equilibrium price*[15] $p_w^* = (p_A^*, r^{*N}, p_E^{*N}, r^{*S}, p_E^{*S})$, with superscripts indicating regions, the quantities exported and imported of the two goods A and B match: the world's excess demand vector is zero, i.e. $p_w^* = \phi_w^{-1}(0)$. Note that the world's excess demand function $\phi_w(p_w)$ is a function of five relative prices[16] with values in six markets: the markets for goods A and B, and two markets for inputs K and E in each region (N and S). At the equilibrium price p_w^* in each region the supply of capital matches its demand $K(r^*) = D_K(p_w^*)$ and the supply of the environmental resources matches its demand as well, $E(p_E^*) = D_E(p_w^*)$. Gains from trade are defined as usual: they are given by the increase of utility $U(A, B)$ associated from a move from an equilibrium allocation in autarky (each country in isolation) to a world equilibrium. Again we must differentiate between private and public gains. *Public gains* from trade are computed by comparing welfare in autarky and at a world equilibrium, with

[15]Conditions to isure the existence and uniqueness of an equilibrium in this model are given in Chichilmisky (1988a).

[16]Namely $p_A, r^N, r^S, p_E^N, p_E^S$, since $p_B = 1$.

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respect to the model with *public production possibility sets. Private gains from trade* are defined in the same fashion, but using the *private production possibility sets.* Since private and public supply curves are similar in the North, the North's public and private production possibility sets are also similar. Thus private and public gains from trade are the same in the North. Not so in the South. The weaker the property rights in the South, the larger will be divergence between the public and private supply curves, and between the private and public production possibility sets. Thus the weaker the property rights in the South, the larger will be the divergence between its private and its public gains from trade.

4. Property Rights and North-South Trade

We already observed that the South often specializes in the export of environmentally intensive goods, such as timber, cash crops such as palm oil and sugar, and other resource intensive commodities. In this section we shall establish that the reason for this is that common property resources are overused in the South, because the true social costs of intensive environmental use are not properly computed. This is also true in some measure in the North. However, we shall argue that the divergence between private and social costs is much larger in the South than it is in the North. This divergence causes the South to specialize in the export of environmentally intensive goods. The divergence between private and social costs is, in turn, explained by the lack of property rights in common property resources.[17]

Consider our North-South model where the environment enters as an input of production, E. Environmental inputs will be shown to have a particularly pronounced effect on the pattern of international trade. This can be seen as follows.

Recall that our model has price-dependent supply functions for environmental resources, given by $p_E = p_E(E)$, where p_E is the price of a unit of the environmental resource E. The importance of this price dependence becomes clear when we observe that *the supply function of an environmental resource depends on the nature of the property rights for that resource, and it determines the patterns of trade.* Consider the common property resource E. If there are no regulations concerning the use of this resource and no enforceable private property rights in this resource, then the cost to an individual of using an additional unit of E as an input of production will be relatively low. This will merely reflect the private costs of use, e.g. in the case of a fishery the private costs of catching, and in the case of an aquifer the private costs of obtaining the water. They will not reflect the full impact on society of the use of the resource, which in the case of the fishery could eventually be the depletion of the stock. In the case of the aquifer this could be damage from overuse such as the

[17] Cohen and Weitzman (1975) analyse a one-input model of an economy in which changes in property rights affect the general equilibrium, via changes in the supply conditions of a common property resource, land.

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salination which takes place when water levels fall below critical levels (Dasgupta (1982)). If however externalities are fully internalized (by regulation or by property rights) so that the cost to an individual of using the resource reflect fully the social costs of its use, then the private costs will be higher and could increase rapidly with the level of use (Dasgupta and Heal (1979), Chapter 3).

So differences in the structure of property rights in the environmental resource that is used as an input of production will be reflected in differences in the supply conditions of that resource. In particular we argue that in industrial democracies property rights are better established and more widely enforceable than in developing countries, and that regulatory policies designed to internalize costs of using an environmental resource (such as polluting clean air with automobile exhaust fumes, or burning coal for heating purposes) are more widespread and widely enforced. This is due in part to the large costs associated with a legal infrastruture and a system of enforcement and control: such costs are relatively more assessible to rich industrial countries.

The private costs of an environmental resource as an input of production will be higher in an industrial democracy than those in a low income country. We shall see in the next section that the supply curve for environmental resources $E = E(p_E)$ will be lower and flatter in low income countries (the South) than in industrial countriees (the North). In general, the larger the divergence between private and social resource costs, the larger will be the divergence between social gains from trade and private gains from tradc. When social prices differ widely from private prices what looks as a relative advantage may actually be a relative disadvantage. We can therefore expect that including environment as a crucial input whose suplies are "abundant" in the South because of the divergence between private and social costs, will lead to substantial economic implications. This will be discussed below.

We shall now derive explicitly the private and social marginal cost curves associated with the production of a common property resource E, such as a fishery. This is analogous to the analysis in Dasgupta and Heal (1979).[18]

Let there be N "Harvesters" of a common property resource, indexed $i = 1, \ldots, N$. Let x_i be the input of harvester i to harvesting the common property resource E. Let $x = \sum_{i=1}^{N} x_i$. The total harvest of yield is denoted $F(x)$. This is the "supply" of the common property resource, and its marginal cost curves

[18]This analysis differs from other approaches to the study of the costs or the value of common resources, for example that of H.J. Ruitenbeck (1990) who is concerned with the value of a rainforest from the point of view of establishing the correct amount of a transfer to a LDC from the rest of the world, to prevent deforestation in the LDC. His definition is closer to a "shadow" price; we seek instead those general equilibrium prices actually prevailing in the market, in connection with (the lack of) property rights.

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(private and social) will be used to define the price dependent supply curves for the environmental common property resource.

LEMMA 1. *Assume that $F(x)$ is strictly concave, e.g. there is more and more effort applied to a fixed stock. Then the private supply curve for the common resource lies below the social supply curve.*

Proof. The marginal product of input is $F'(x)$. The average product is $F(x)/x$, and by strict concavity $F(x)/x > F'(x)$. Look first at marginal products. The private marginal product of the input is denoted Pmp and the social marginal product is Smp. If harvester i uses inputs x_i, his/her yield is $y_i = x_i F(x)/x$ i.e. average yield per unit of input times amount of input. So harvester i's production function for E is given by

$$y_i(x_i) = x_i F(x)/x$$

$$\text{Pmp}_i = d/dx_i[x_i F(x)/x]$$

Now,

$$= d/dx\,[x_i F(x_i + x_{-i})]/(x_i + x_{-i}) \text{ where } x_{-i} = \sum_{j \neq i} x_j.$$

Hence

$$\text{Pmp}_i = f(x)/x + x_i\{xF'(x) - F(x)/x^2\}$$

$$= F(x)/x + x_i/x\{F'(x) - F(x)/x\}$$

Since $\text{Smp}_i = F'(x)$,

$$\text{Smp}_i - \text{Pmp}_i = F'(x) - F(x)/x - (x_i/x)[F'(x) - F(x)/x] \qquad (3)$$

$$= [F'(x) - F(x)/x][1 - x_i/x] < 0.$$

Therefore the social marginal product is lower than the private one. Now if q is the price of the input used to harvest the common property resource E, i.e. q is the price of x_i, then defining Pmc_i to be the private marginal cost of i, and the same for the social marginal cost Smc_i, we have

$$\text{Pmc}_i = q/\text{Pmp}_i \quad \text{and} \quad \text{Smc}_i = q/\text{Smc}_i.$$

Since by (3) $\text{Smp}_i < \text{Pmp}_i$, then $\text{Pmc}_i < \text{Smc}_i$, as we wished to prove.

For this result to persist at different price levels, it suffices that the slope of the Pmc_i be slower than that of the Smc_i which we now assume. Figure 1 illustrates.

Observe that when property rights are well defined then the private and the social supply curves (or marginal cost curves) are one and the same. This is achieved for example by charging everybody a tax equal to the negative effect which they have on everyone else. This tax raises the marginal cost to the level of the social cost, so that the relevant supply curve is the social curve. Our

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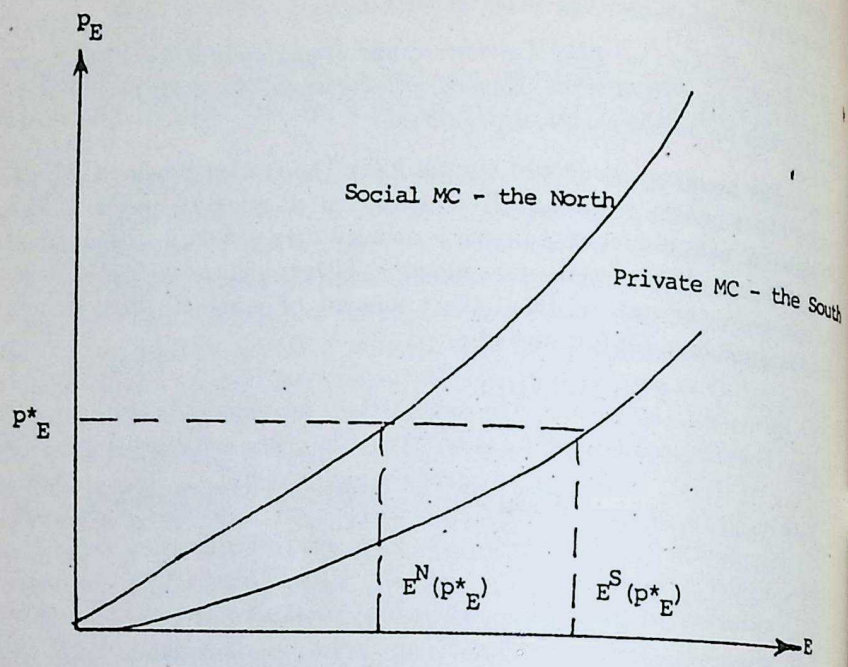

Fig. 1 Social costs exceed private costs. At each price p_E of the environmental resource E, the south supplies more than the North.

assumption is that this is often the case in an industrial democracy, and indeed many practical examples exist to substantiate this asumption. But this is often not the case in a developing country. This means that in an industrial democracy, which we call the North, there is essentially one price-dependent supply curve for the environmental resource (private and social costs being the same) while in the South there are two different curves, the private and the social curves, and the private curve prevails in setting up patterns of trade. For the same input, under the same production conditions, this difference in property rights leads to different effective supply curves in the North than in the South: a lower and flatter curve in the South. This is quite independent from any assumptions on input prices or on any other prices. The difference simply reflects the lack of property rights.

When social costs differ substantially from private costs and property rights are not well established, the social cost of the environmental input will be substantially underestimated by market prices. This means that at the same price much more of the input would be provided than would be socially optimal. In other words, the South, because of lacking property rights, appears to have a relatively higher supply of environmental resources *at each price* than the North

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does. Indeed, at each price, the supplies offered will be higher than they ought to be if proper social costs were computed.

The reality could be very different. When social costs are computed, the South could have a comparative disadvantage in the production of environmentally intensive goods (e.g. the social cost of extracting the same amount of environmental resources could be higher in the South, due for example to a relatively smaller stock). So everything else being equal, the lack of property rights in the South would explain why the South specializes in the exports of environmentally intensive goods. This occurs through the functioning of markets in a classical model of trade through comparative advantages, except that the comparative advantages here derive from a market failure to compute the true social costs of the environmental input:

THEOREM 1. *Consider the North-South model where both regions have the same technologies, the same homothetic preferences and the same natural endowment of environmental inputs, i.e. the same social supply curves. If the South has ill defined property rights for the common property resources, then at a world equilibrium the two regions will trade and the South will export environmentally intensive goods. The South will exhibit private gains from trade (as defined in Section 3) but it will use more environmental resources and it will produce and export more environmentally intensive goods (B) than it is Pareto efficient.*

Proof:. Recall our assumption that the two regions are identical, but the South's supply of E is given by the private supply curve $E^{\pi}(p_E)$ while the North's is its social supply $E^{\sigma}(p_E)$. Consider the map from the world equilibrium commodity prices p_A^* and p_B^* to equilibrium factor prices in each region r^* and p_E^*.[19] Under these conditions, at the world equilibrium price vector p_w^*, factor prices will be the same in the two regions, p_E^* and $r*$. However since the supply curve of environmental resources in the South $E^{\pi}(p_E)$ was shown in Lemma 1 to be higher than the supply curve $E^{\sigma}(p_E^*)$ in the North, at the world's equilibrium price vector p_w^*, the South supplies more environmental resources than the North (Figure 1). It follows that at p_w^* the South produces a larger amount of B than does the North, since the production of B is intensive in the input E, which is more abundant in the South (see also Chichilnisky, 1981, 1988a).

Note that since the two regions have the same homothetic utilities, and at p_w^* the two regions face the same relative prices for goods A and B, the North and the South demand goods A and B in the same proportions. Therefore, at the equilibrium price vector p_w^* both regions demand the same proportion of A and

[19]The existence of such a function is well known (Stolper and Samuelson (1941)); within this North-South model it is established in Chichilnisky (1981, 1988a) for the case where the two regions have the same constant returns to scale production functions without substitution, and it is also true for functions with substitution such as Cobb-Douglas with constant returns to scale.

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B, but the supply of B in the South is proportionately larger. It follows that when the international markets clear, the South must export B, and the North import B, i.e. the south is an exporter of environmentally intensive goods at the world equilibrium. A computation of world equilibrium prices in this model and a proof of their existence and uniqueness, is in Chichilnisky (1988a).

Now consider a different world's equilibrium (denoted by the equilibrium prices p_w^{**}) where the South's supply of E is given by the social supply function $E^c(p_E^*)$[20]. By assumption this equilibrium is unique, and by the first welfare theorem, the equilibrium allocation is Pareto efficient. In particular the quantity of environmental resources E used and the amount of B produced in the South (denoted B* in Figure 2) is Pareto efficient at the equilibrium p_E^*, with $E^* = E^c(p_E^{**})$.

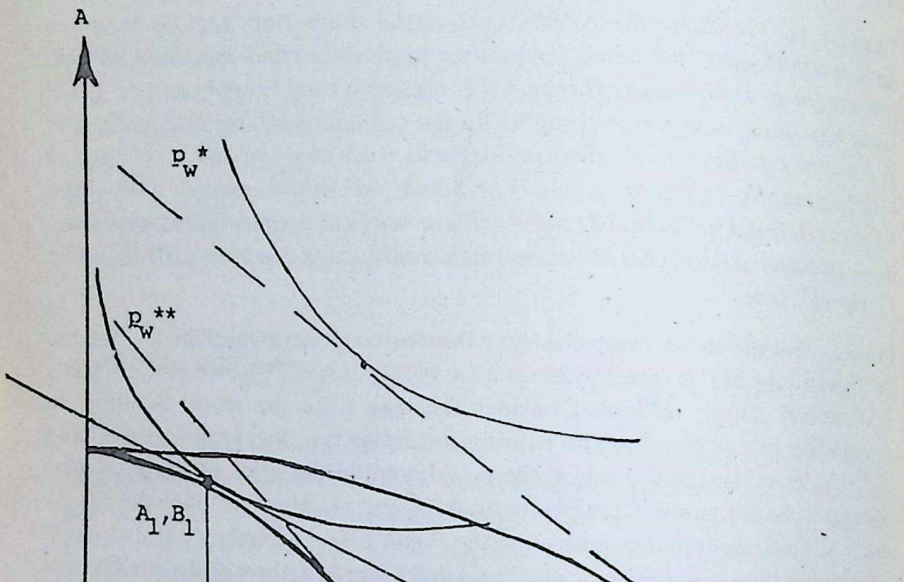

Fig. 2 (A^*, B^*) is the Pareto efficient allocation in the South at a North-South equilibrium computed using social supply curves for the resource E. (A_1, B_1) is an allocation at the South's equilibrium is autarky (before international trade). (A_2, B_2) is theNorth-South equilibrium exhibiting private gains from trade and overuse of the resource E.

[20]Note that when resource supplies in both regions are given by the corresponding social supply curves, there is no international trade in equilibrium, because the two countries are then identical. This is an extreme specification which is easily relaxed. In general, when both countries operate at their social supply curves for E, trade will take place provided that the technologies or the demand are different across the two regions.

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Now as shown above, in the world equilibrium (p_w^*) where the South operates on its private supply curve for E, $E^{\pi}(p_E)$, the quantity of B produced by the South (B_2 in Figure 2) exceeds the quantity supplied by the North (which equals the Pareto optimum B^*). Similarly, the quantity of E extracted at this new equilibrium, $E^* = E^{\pi}(p_E^{**})$, exceeds the same quantity at the equilibrium p_w^{**}, which is $E^* = E^{\sigma}(p_E^*)$. Therefore at p_w^* the South uses more resources (E) and exports more environmentally intensive goods (B) than is Pareto efficient, as we wished to prove. Figure 2 illustrates.

Note that the environmental overuse described in Theorem 1 is induced by a competitive market response to the lack of property rights in the South:

COROLLARY 2. *If exports of the environmentally intensive good B by the South led eventually to the equalization of the price of environmental resources used as inputs in the two regions, the South will still use more environmental resources than the North (and more than is Pareto optimal) unless property rights for the common property resources are improved in the South. If property rights are not improved in the South then the exports of environmentally intensive goods and their domestic production would have to be curtailed in order to achieve patterns of consumption which duplicate the North's social optimum.*

This follows directly from Theorem 1 and Lemma 1. Figures 1 and 2 illustrate. The interest of this corollary is to emphasize that the overuse of environmental resources by the South is not necessarily caused by their prices being lower in the South than in the North, as it is often thought. Equalizing prices through the international market will not resolve the problem of overuse of environmental resources.

Matters are altered substantially if environmental policies are enacted which lead to a convergence between private and social costs in the South. In this case, the supply of environmental resources will reflect more accurately social costs, and the supply curve will be more similar to that of an industrial country. Since the costs of inputs are an important determinant of trade, we can expect a significant effect of environmental policies on trade policies. As private costs of an environmental resource reflect more fully social costs, the whole "offer curve" of the economy, which relates quantities of exports and their prices across market equilibria, is altered. The market equilibrium changes with the environmental policy because of the associated changes which it produces on the factor supplies. In a new market equilibrium, prices, quantities, consumption levels, input uses, imports and exports will all vary. Thus trade policy reflects environmental policies.

For example, any policy which improves the property rights of the Amazonian small farmer, will change the cost function of Amazonian resources. This will in turn affect relative input prices and thus the computation of relative advantages and of gains from trade from agricultural exports based on

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deforestation of the Amazon. Production patterns will shift. Export patterns will reflect more fully the social cost of deforesting the Amazon forest.

5. Factor Price Equalization and Environmental Negotiations

Environmental negotiations proposed today include the assignment to each country of a marketable "licence" to use its atmosphere. For example, each country has the right to gas emissions measured in a common unit, up to a point which adds to a commonly agreed worldwide maximum (e.g. Baumol and Oates (1975), Dasgupta and Maler (1990)). Other proposals include side payments in the form of technology transfers to developing countries in exchange for environmental controls which benefit industrial countries (The Montreal Protocol).

In all of these negotiations, a convergence of perceived "costs" or "market values" for the environmental resource would be useful for arriving at an agreement. In different countries this will reflect in part the technology and demand conditions for the environmental resource, and also cultural standards as well as different property rights with respect to common resources. The values arrived at may be very different in different countries.

Matters are complicated by the fact that environmental resources are not mobile. Clean air in Mexico City is not clean air in Los Angeles, a healthy aquifer in India has little bearing on water supplies elsewhere. In other words, clean air in Mexico is a different commodity than clean air in Delhi, though presumably we should not want to attribute *a priori* a lower value of clean air to a poor person than to a rich one. This price differential is not surprising: we know from the theory of international trade that when inputs are not mobile, the prices of the same input may vary across regions in a world market equilibrium. Effectively the "world market" for trading environmental resources is segmented into regional markets and there is no *a priori* reason for markets to reach a common price across regions.

However, a rather striking result of the theory of international trade deals with this issue through a fundamental theorem: factor price equalization. This establishes conditions[21] to guarantee that market prices of inputs are equal across the trading regions when technologies are the same. The remarkable fact is that factor prices are the same even when inputs are not mobile, i.e. even when there is no world market for a local input. This occurs through the indirect effect of the markets for traded goods on the non-traded goods, and it requires *inter alia* that the number of goods be equal to the number of inputs and that technologies be the same across regions.

We could therefore expect an analogous result here; indeed in Theorems 1 and 2 we showed conditions under which the international trade in goods could lead to a convergence of environmental resource prices across regions. Trade

[21] P. Samuelson (1948, 1949)

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could thus have a positive effect on environmental negotiation, in that it could lead to a convergence of views about the values of environment resources.

However, in order to realize this positive effect, the production technologies of these two regions must be similar, for this is what is required for *factor price equalization*. A certain amount of technology transfer from the North to the South may be required to achieve these conditions. This appears to be understood, at least implicitly, in the current negotiations which link environmental controls with technology transfers (footnote 2). However, the point which may not be well understood is that even with the same technologies, and even with the same environmental resource prices in the two regions, there will be market induced overuse of environmental resources in the South unless its property rights are improved. This agrees with the points in Dasgupta and Maler (1990), who state that the success of the negotiations depends crucially on property rights.

But our requirements go further. Dasgupta and Maler (1990) argue that the *countries'* property rights must be established prior to achieving any success in these negotiations. This is correct, but not enough: here we argue that the property rights which must be established are not only those of the countries, but also those of the individuals whose lives are affected by the environmental resource within the countries, including those yet unborn.[22]

In effect we are dealing with two different markets: one for marketable licences and another for international trade of environmentally intensive goods. Each market will have an impact on the other. Indeed, policies enacted in one of the markets will have an effect on the other, an effect which could sometimes work in the intended direction, and sometimes in the opposite. The precise incentives for the success of a market on tradeable emission permits within the context of the larger market for North-South trade should be an interesting subject for further research.

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PRIVATIZATION: A NEW GLOBAL CHALLENGE*

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While the 1960s and 1970s were decades of expansion of the public sector in most countries, the 1980s was a period during which that trend was reversed, and more and more states began transferring public enterprises and activities to the private sector. The policy of privatization started in Britain in 1979 and is being adopted by an ever increasing number of countries. At first it was mainly the developed countries with market economies which showed interest in privatization but subsequently more and more developing countries and countries with socialist economic systems started to promote privatization.

In this paper are outlined the reasons for the change of emphasis from nationalization and socialization to privatization, the techniques used for transferring the ownership and/or the management of public enterprises to the private sector and the problems associated with the privatization process.

Introduction

For most countries the 1960s and 1970s were decades of rapid expansion of the public sector. By contrast, the 1980s was a period during which the trend was reversed. The pace of the reversal is being accelerated in the current decade. To a large extent the expansion of the public sector took the form of *nationalization* or *socialization* of private firms or of the creation of new public enterprises. To contract the public sector the governments of many countries resort now to *privatization*, i.e. to the transfer of public enterprises to private hands. This shift in pattern reflects a deep philosophico-political change which started timidly in the late 1970s and is spreading rapidly.

Privatization is considered by many almost as synonymous to liberalism but the two terms mean different things. Privatization refers to the transfer of assets from the public to the private sector while liberalism means the freeing of forces of competition. Privatization can proceed without liberalism but usually the two policies tend to be symbiotic.

The policy of privatization began in Britain in 1979 and gained full momentum in the 1980s. During the first ten years of its application in Britain

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more than one million places of employment were transferred from the public to the private sector while more than eight million inhabitants of the British Isles became shareholders of British corporations for the first time in their lives. The percentage of British people owning shares increased from 5% to at least 20% (Young, 1989, p. 140). At the same time there was a noticeable increase in the profits and the price of shares of privatized corporations.

The successful British experience encouraged the spread of privatization to most parts of the world, including many developing countries. World Bank data show that privatization has begun, is in progress or has been completed in more than 60 developing countries (World Bank, 1988). There are only a few countries where there is still no concern and no planning for privatization. In this paper we will outline the reasons for the change of emphasis from nationalization and socialization to privatization, the techniques used for transferring the ownership and/or the management of public enterprises to the private sector and the problems associated with the privatization process.

Arguments for the Expansion of the Public Sector and Actual Experience from the Operation of Nationalized Industries

The real basis for the expansion of the public sector in the area of the private sector was mainly ideological and political: the aim was to replace private enterprises pursuing their own interests by public corporations in which management and labour were expected to work for the public good. However, besides that, economic arguments were also used to justify the expansion of the public sector, the most common being the following: (a) It was necessary for speeding up the developmental process. (b) It was also necessary for improving the distribution of income and wealth. (c) It would result in lower prices for goods and services because of the elimination of profits and of resource wastes caused by the coexistence of several private firms in the same market. (d) It would improve labour relations and enhance the sense of responsibility of workers since they would be working for the public benefit and not for the profits of private owners. (e) Consumer satisfaction would increase due to greater sensitivity to the consumer needs of managers and labour of public enterprises. (f) Worker care for installations of enterprises belonging to the public and not to private owner ought to increase.

The above expectations were not fulfilled. Instead several problems appeared as the public sector spread: (a) In many countries economic development was delayed instead of being accelerated. (b) The distribution of income and wealth did change but usually in a way which destroyed incentives for work, saving, risk taking etc. (c) There was political interference in the operations of enterprises the management of which as a rule had to sacrifice economic to political and social considerations. (d) There was a lack of "carrots and sticks" for managers and labour resulting in low efficiency. (e) The appointment of managers was usually made on the basis not of merit but of political connections. Individuals without the necessary education, experience

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and other qualifications were appointed as managers. Their loyalties were not to their firms but to those who appointed and could dismiss them. (f) Managers had not real operational freedom. (g) Business investments were based not on the actual needs of enterprises but on political decisions concerning the volume and the sectoral and regional distribution of public investments. (h) The remuneration of labour in public enterprises increased much faster than in private firms due to the strong tactics of labour unions. This led to increase of production costs and prices and to budget deficits and borrowing.

In many cases public enterprises became monopolies although they were not "natural monopolies". Costs and prices increased faster than in the private sector due to lower productivity, and service to consumers deteriorated. Managers and the workforce lacked the incentives for reducing costs and improving product quality. Consumers suffered but usually their voices were not heard. Studies have shown that on average production costs were lower in private firms than in public firms by 30% in Britain, 50% in former West Germany and 40% in the USA (Pirie, 1989, p. 1).

Labour relations and the attitude of labour syndicates in nationalized industries instead of reflecting a spirit of social responsibility became worse than before. Due to the monopoly position of public corporations and to their management's tendency to yield easily to labour demands the strength of labour unions grew and benefits unrelated to productivity were granted to management and the workforce. Nationalization instead of bringing labour peace brought more strikes, labour stoppages and conflicts.

The care of buildings, machinery and equipment in public corporations was much poorer than in private firms. This resulted in higher repair and replacement costs, lower product quality and higher productions costs.

In several cases despite the high production costs of public enterprises their prices were kept artificially low. This resulted in big deficits and increased borrowing of the public sector which had adverse effects on economic stability, on rationality of resource allocation and on equity of distribution of fiscal burden.

Due to the higher production costs of inefficient public enterprises there was inefficient allocation of resources for the economy as a whole. This problem was aggravated by the practice of most public corporations of pricing their products without including in their costs interest on capital and a normal profit.

The spread of public ownership created also difficulties for private firms. In most cases public enterprises had privileged treatment with regard to funding, public sector procurements, etc., which created conditions of unfair competition for private firms. Furthermore, since the latter use goods and services produced at relatively higher cost by inefficient public enterprises their own production costs rose.

Even in highly developed countries such as Britain, France and Sweden the operation of public enterprises created problems. To reduce them and improve efficiency efforts were made in certain cases for creating conditions resembling

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those of free competition. For example, in Britain public corporations were asked: (a) To adopt pricing policies based on marginal cost. (b) To apply specific rules for evaluating their investments. (c) To proceed with investment plans only when the expected rate of return was comparable to that in the private sector. (d) To adjust their behaviour to certain economic and operational targets. (e) To follow specific processes for planning their operations and for evaluating their performance.

However, the application of the above reforms was hindered by certain difficulties and did not prove successful. Following the failure of the reforms it gradually became apparent that conditions like those prevailing in the private sector could be created only through privatization and competition. The problems caused by the operation of public enterprises and the dissatisfaction of the consumers with their services created a favourable climate for the change of government policy and the search for methods to boost private initiative and restrict public sector activities.

Objectives of Privatization

The type of ownership of an enterprise affects significantly its behaviour and performance. Managers of private firms act on behalf of shareholders. Their positions, salaries and fringe benefits depend largely on the firm's economic performance. Managers of public corporations act as instruments of the government which appointed them and can replace them. Since their salaries are unrelated to economic performance their incentives to increase efficiency are reduced. Generally the objectives of public enterprises tend to differ significantly from those of private firms and this results in differences in behaviour.

The privatization of public enterprises aims at their "depoliticisation" and their transfer from the "political arena" to the "market arena". More precisely, the main objectives of privatization are:

(a) The increase in efficiency and the better utilization of society's resources. This objective constitutes the main justification for privatizations. If a private firm fails it will go bankrupt and its owners and managers will suffer the consequences. By contrast, the higher costs and the inefficiency of public corporations hurt the consumers while the deficits are covered by the public budget. This way any pressures for increasing efficiency in public enterprises are weakened and so are the pressures and the incentives for modernization and technological innovation.

(b) The reduction of the borrowing needs of the public sector. As most public enterprises have deficits which are covered by the state, their privatization contributes to the reduction of the borrowing needs of the latter.

(c) The freeing of investments of public corporations from government restrictions imposed for reasons of broader economic policy. Cuts in public investment expenditures are difficult for the general public to perceive and are politically less painful than other forms of public spending reductions. Therefore they are made frequently when the government wants to reduce public spending

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or increase public consumption expenditures. Because of this practice public enterprises are often unable to obtain the capital goods necessary for the application of new technology and the reduction of labour costs. When the public enterprises are privatized they can obtain capital in the open market and materialize their investment plans.

(d) The reduction of the size of the public sector and the increase in the participation of people in the ownership of enterprises in order to promote the spread of ownership of wealth and economic democracy.

(e) The strengthening of market forces in the process of the determination of labour's remuneration. Wages and salaries in public enterprises are determined usually under conditions of bilateral monopoly in which labour unions are especially strong. Public firms can pass the higher labour costs to consumers or taxpayers since neither group can react. This creates a tendency in public enterprises for management and unions to serve each other, a practice that increases the strength of unions. This applies to negotiations not only for pay increases but also for introduction of new work methods and other major changes. Private firms have to negotiate with labour unions very cautiously because a rise in labour costs causing an increase in product price could make the firm non-competitive and drive it out of business.

(f) The stregthening of the market system for better serving the consumers. When products are produced by private firms consumer preferences have to be taken into account seriously. Private firms, particularly when they are competitive, have both the ability and the motive to adjust quickly to changing market conditions and strive continuously for innovation and product improvement to beat their competitors. Public enterprises' activities are more oriented to the interests of their managers and employees and to political objectives and less to the needs of consumers who are "captives of producers". Usually privatization leads not only to lower prices but also to greater product choice and better customer service.

(g) The participation of labour in the ownership of their enterprises in order to increase their interest in them and improve their efficiency. In Britain approximately 90% of people working in public enterprises became shareholders after privatization. In certain cases corporations were bought by their employees with or without the participation of their managers and banks.

Comparisons of Efficiency of Public and Private Firms

In many countries efforts have been made to compare the efficiency of public and private enterprises with the use of empirical data. Such comparisons are beset with serious problems: (a) It is difficult to differentiate the effect on business efficiency of the form of ownership from the effects of other factors. (b) In only a few sectors is there coexistence of public and private ownership. (c) There are problems associated with efficiency measurements usually based on profit, unit cost and productivity definition and measurement. Profit depends largely on competitive conditions and the regulatory system applicable to a

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sector, particularly concerning the pricing policies of its enterprises. Unit cost depends on the cost of productive resources and in some cases government policies enable public enterprises to obtain production factors at lower prices. In addition, unit costs depend also on the quality of products which often differs in public and in private enterprises. Finally, it is difficult to measure productivity because of problems in quantifying different dimensions of product quality.

The above problems notwithstanding, there are several empirical comparisons of efficiency in public and private firms: Millward's review of empirical studies conducted until 1980 did not reveal any significant difference in efficiency in the two types of enterprises (Millward, 1982). Other economists who examined those studies more carefully, taking also into account other parameters such as degree of competition, concluded that private firms were more efficient than public enterprises (Vickers and Yarrow, 1988). Another British study for the period 1968–1980 concluded also that public enterprises were less efficient than private ones (Pryke, 1981). A comparison of the efficiency of public and private firms in air transport, ferry boats and hovercrafts (Pryke, 1982) reached similar conclusions, that private firms were more efficient and were making more profits than public enterprises. Several other studies confirmed that conclusion (Rowley and Yarrow, 1981; Forsyth, 1984; Bruce, 1986). Also studies of productivity in British corporations have shown that it was much lower in public corporations than in private ones (Pryke, 1981; Aylen, 1980; Findlay and Forsyth, 1984; Henney, 1987). It should be noted that all those studies suffer from certain weaknesses due to measurement difficulties mentioned above.

Similar comparisons were made in the U.S.A. in three sectors where there was both private and public ownership of enterprises: In production and distribution of electricity, in water distribution and in garbage collection (Millward, 1982; Yarrow, 1986; Boardman and Vining, 1987). For the first two sectors there was no conclusive empirical evidence in favor of either public or private enterprise (Meyer, 1975; Pescatrice and Trapani, 1980; Fare et al., 1985; Edison Electric Institute, 1985; Crain and Zardkoohi, 1978; Bruggink, 1982). For the sector of garbage collection there was clear evidence of the greater efficiency of private businesses. However it has been argued that the difference in efficiency was not due to the form of ownership but to the fact that private firms were using bids for contracting garbage collection (Kitchen, 1976; Savas, 1977; Stevens, 1978). If this system is adopted by public enterprises the differences in unit costs disappear. This can be used as an argument that what counts most is not form of ownership but the existence of competition.

According to the above remark, if public corporations and private firms operate under equally competitive conditions, no efficiency differences should be expected. However, public corporations do not operate under similarly competitive conditions due to political interferences, state privileges, and lack of incentives and pressures for greater efficiency, factors which create a preferential regime for them and restrict competition.

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Prerequisites for Successful Privatization

In order for privatization to succeed it has to be preceded by certain actions:

(a) The preparation of a feasibility report showing the state of the public enterprises, the feasibility of its privatization and its consequences for the enterprise and containing also an analysis and evaluation of possible techniques with which privatization could proceed and of preparatory actions which must be taken.

(b) The state's decision for privatization and its agreement concerning the method to be used for it.

(c) The selection of a reputable consultant firm experienced in privatization which will become responsible for the privatization procedures.

(d) The preparation of the enterprise for privatization through the appointment of suitable management, the introduction of modern work methods and action to change the mentality of the workforce.

(e) The creation of the legal framework necessary for the transfer of the enterprise to the private sector. Also the provision for the creation of the institutional framework which will allow the supervision and control of the enterprise after its privatization to protect the public from possible monopolistic exploitation.

(f) The decisions which must be made concerning various issues related to privatization, e.g., the number of shares to be sold, their price, the timing of the sale, etc.

(g) The preparation and distribution of information and publicity material.

Methods of Privatization

Various methods can be used for transferring public enterprises to the private sector. The selection of the appropriate method for each specific case must aim at minimizing the reaction of people with vested interests in the preservation of the public status of the enterprise. Efforts must be made so that benefit from the privatization for most of them outweigh whatever negative efforts might occur.

In cases of privatization of enterprises with monopoly power people usually fear its possible abuse by private owners. To dispel such fears the government must guarantee the regulation of the activity and the increase in competition. For example in Britain in cases of privatized enterprises which were impossible to operate competitively provisions were made for the creation of regulatory agencies responsible for supervising and controlling them. It was also decided that the prices of services of such corporations could not be increased by more than the increase in the consumer price index minus a certain percentage.

The increase in competition can be accomplished through various means but mainly through the break-up of big corporations. Many public enterprises are considered natural monopolies without really belonging to that category. For example even if there are reasons for having only one network for distributing electricity, water, gas or even telecommunication services in a given area, it is

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not necessary to have only one producer of electricity, gas or telecommunications. There is even less justification for monopolies in road, rail, water or air transport.

To create a favourable attitude among consumers of services produced by public corporations which are to be privatized a provision can be made for facilitating the purchase of shares by consumers, for giving them bonus shares of vouchers towards future bills and for guaranteeing that there will be no deterioration of the quality of service.

To safeguard public interest in the case of privatization of public enterprises of significant national importance the government can keep a single non-voting share which entitles it to veto any change in the company charter concerning the percentage of shares that can be owned by any shareholder, the nationality of shareholders and directors, the conditions subject to which the enterprise can cease its operations, etc. The system of the "golden share", as it has been called, was used for the first time in Britain.

To create a favourable climate for privatization it is advisable for the government to begin with the easier cases, i.e. with profit-making public corporations operating under competitive conditions. A condition for the success of privitization is the "privatization" of its process. The activities associated with privatization, i.e. the evaluation of the assets, the preparation of advertising and information material, the promotion of the sale etc. must be done by private firms with experience in privatization in other countries. Since it is also essential to combine foreign expertise with knowledge of domestic particularities it is advisable to have cooperation of foreign and domestic firms.

In Britain more than twenty privatization techniques were used[1] the msot important of which are outlined below:

1. Sale of Shares through the Stock Exchange

The use of this technique presupposes the existence of a developed capital market. It has been employed in Western Europe for the sale of corporations such as British Airways, British Gas, British Telecom, Rolls Royce, Lufthansa, Volkswagen, Paribas, St. Gobain, Matra and several of the enterprises of the Italian Organisation for Restructuring Enterprises.

With this technique all or part of a public corporation's stock is sold to the public through the stock exchange. Many argue that this can be done only for profitable enterprises but even enterprises with losses could be sold if the prospects for making them profitable are good. In certain cases privatization must be preceded by reorganization and improvement of the enterprise's performance.

To ensure the support of management and labour and the success of privatization it is essential to try in advance to neutralize their possible reaction. The most effective way is to give them options for buying shares on favourable

[1]For an extensive discussion of these techniques see Pirie, 1988, pp. 69–252.

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terms and even to distribute free shares to them. This policy also helps to attenuate the distinction between capital owners and labour.

Ownership must be spread as widely as possible to increase the public's interest and its participation in the privatization programme and also to encourage the creation of interest groups among new owners to act as lobbies against potential expropriation. The spread of ownership can be accomplished through the dissemination of information, extensive advertising, distribution of leaflets, the option to pay for the shares in instalments, etc. To assure the backing of consumers vouchers could be given to buyers of shares to be used toward future bills.

A sensitive issue is the selection of the selling price of shares. With a relatively high price there may be no sufficient buyer interest while with a low proce the public sector will be losing money and the government may be accused of "selling out" public assets. Experts suggest that if there are doubts it is better to opt for a lower than for a higher price.

To avoid the dilemma of choosing between higher and lower prices shares can be sold through bidding: Each prospective buyer bids for a number of shares specifying his price. Shares are subsequently distributed on the basis of the prices offered. This technique assures greater revenue for the government but discourages small investors who find it difficult to estimate the right price. This problem can be avoided if bidders are allowed to propose their own prices but the final price is fixed at the level which would equate demand to the supply of shares. This way small investors know in advance that they will not pay an excessive price while on the other hand the state is paid an economically correct price. In Britain in a number of cases they used a combination of sale with a fixed price with sale through bidding: A percentage of the shares were sold to small investors at fixed price while the rest were sold to institutional investors through bidding.

Instead of selling the entire stock the state can sell only a percentage and hold the rest. It is essential to transfer the majority of shares to the private sector otherwise there may be no real change in the management of a public enterprise. This technique is deemed especially suitable when the public's ability to absorb all new shares is limited and also when there is uncertainty about the right price of shares. If privatization is successful and the price of shares rises the state can sell later the remaining shares at the higher price and obtain greater revenue.

2. Direct Sales to Private Buyers

When it is not possible or expedient to use the stock exchange, the transfer of the public enterprise to the private sector can be done through direct sale of shares to individuals, corporations, etc. This technique is particularly useful when no developed capital market exists, the enterprise is problematic or the privatization must be completed fast. Transparent procedures are absolutely necessary to avoid accusations of asset stripping by selling off cheaply the best corporations while keeping the money-losers. Confidence of labour and the

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public in privatization can be enhanced through the appointment of a high-level non-partisan advisory group of reputable experts from the banking and capital market community for supervising the privatization process.

3. Selling Sections of an Enterprise

It is often advisable to sell off parts of a public corporation which can operate as independent units. For example, when an enterprise is of strategic importance the transfer to the private sector of activities which make it strategic may be undesirable but other parts can be sold. Other reasons for breaking up a public corporation and selling parts of it are: The desire to create competition, the fact that it is easier to find buyers for parts of a large corporation than for its entirety, and the fact that the total amount of money that the state can get from the sale of individual parts of a large corporation may be larger than what it can get from the sale of the whole corporation.

4. Selling to Managers, Employees and Workers

A public enterprise can be sold to its managers, employees and workers. The transformation of the people working in a public enterprise into owners usually creates incentives for greater effort and can change drastically the enterprise's prospects. Selling exclusively to the management may cause unfavourable impressions and problems while selling to both the management and the workerforce may result in invigoration of the enterprise. These two parties usually know best the actual worth of their enterprise and the measures needed for increasing its efficiency.

A problem is that workers are not used to holding shares or having other types of participation in corporations and frequently do not like such solutions. They may also lack the money needed for buying the shares. Such problems can be overcome through the right kind of information, the cooperation with banks for obtaining loans or for participating in the sale of shares, the adoption of a plan of staggered payments for the shares, etc.

When a public corporation is bought by its workforce its operation may be affected adversely if they are reluctant to agree for the necessary remuneration to attract high-level managers. On the other hand, when the managers become co-owners of the corporation it will be very difficult to have them replaced later with more competent ones. It is therefore essential to ensure in advance that the management which will participate in the acquisition is efficient.

5. Giving the Enterprise to the People Working in it

Especially problematic enterprises or ones with a history of strained labour relations or with particularly hostile labour unions may be impossible to sell to their managers, workforce or third parties. In such cases the state can give them away to the people working in it. The latter are not likely to accept the offer if there is no plan for writing off all or part of the enterprise's debt and for putting them in shape. It is preferable for the state to donate to the workforce the assets

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of a problematic corporation and write off some of its debts than to be burdened with its annual deficits.

6. Transferring the Production of Public Services to the Private Sector

In certain cases the state can transfer the production of public services to the private sector through the use of special contracts. This technique has been used successfully in some countries for the supply of services usually provided by municipalities, e.g. the cleaning of hospitals and public buildings, the collection of garbage, catering etc. Details concerning the supply of the service or the operation of the enterprise and the penalties for violation of the agreement must be well specified before the bidding to ensure the quality of service and the satisfaction of consumer needs. Those who will be selected should provide money deposits as guarantees for nonviolation of the terms of agreement. If the bidding is repeated periodically contractors will have an interest in fulfilling their obligations and in offering the best possible terms in the new bidding to preserve their status. Competitive conditions can thus be created in monopolistic sectors.

In the beginning the use of such a technique usually meets resistance from the workforce. It is advisable to reduce that opposition by making provisions for the existing workforce to be transferred to other activities or to be utilized, at least partially, by the private firm which will be selected, or by making other arrangements which will appease the workers and employees.

7. Privatizing the Construction of Public Works

Privatization can also spread to public works such as roads, harbours, etc. which instead of being built by the state or by public corporations can be constructed by private enterprises through self-financing. The firms which undertake them are granted the right to keep the revenue from tolls and other user charges for a specified period. This way it is possible to construct without fiscal burden public works necessary for development. Since the revenue of private firms from such works depends on how successful they are they have an incentive to select projects that are in greater demand by the public.

8. Privatizing without Selling the Assets

For problematic enterprises which are not possible or appropriate to sell off, privatization can at first be restricted to their management. The state contracts a management firm, to operate a public enterprise for a specified time period. Usually it is agreed that the management firm will bear all losses but will share any profits with the state. This technique is particularly suitale for enterprises losing money. If the management company fails to produce profits the state loses nothing while if it shows profits the state receives a part and can also sell off the enterprise at a higher price than before. This technique has been used with success in certain African countries and has the advantage that it provides

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an opportunity to use foreign management firms without causing adverse public reaction.

Problems of Privatization

Privatization has proved to be a slow process and has encountered a number of problems in all countries where it has been applied. Experience has shown that it is much easier to nationalize or socialize an enterprise than to privatize it later. The problems are more formidable and the process is slower in developing countries and in countries which had socialist economies. In such countries there is no developed capital market or its capability is very limited making privatization through the stock exchange impossible or very difficult. Usually the enterprises have to be sold directly to big captial owners. However, there may be significant popular reaction to the sale to the relatively few capitalists who dominate the economies of poorer countries or to foreign buyers.

In developing countries the reactions of adversely affected interest groups—the managers and the workforce—are usually very strong and countribute to the creation of a climate inimical to privatization. This makes the governments reluctant to sell off profitable enterprises and willing to sell only those losing money. Interest of prospective buyers for such enterprises is however limited and as a result the pace of privatization is very slow. To make the sale attractive the state falls often into the trap of granting monopolistic powers to the enterprise which is to be privatized. The result is the elimination of the most important benefits of privatization.

A serious problem for the privatization in developing or in formerly socialistic countriees constitutes the shortage of appropriately educated and trained managers able to manage efficiently the privatized firms. Another problem is the need for significant and time-consumng operational and financial restructuring of most public enteprises before proceeding to privatization. The capabilities of the public sector in those countries to plan, follow up, implement and supervise privitizations are very limited. In the developing countries there is also a climate of mistrust concerning the honesty of politicians and public officials and a tendency for public tolerance and often support of most mobilizations and actions of labour unions against privatization. These phenomena make privatizations even more difficult.

The World Bank (1988) attributes the slow pace of privatization in developing countries to factors such as the opposition of labour and bureaucrats, the excessive expectations about the selling price for the enterprises, the indecisiveness concerning the sale of a public enterprise as it is or after restructuring and the technique to be used fo privatization, the reservations and criticisms concerning the accumulation of assets in the hands of few local capitalists or the purchase of public property by foreigners etc.

In countries without relevant experience the pace of privatization can accelerate through the use of foreign experts working jointly with local people. Such teams should include experts in privatization and specialists in capital

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markets and banking, economics and accounting. Since the creation of a favourable climate is of utmost importance for the success of a privatization, specialists in public relations should also be included in these teams.

Arguments against Privatization of Public Enterprises and Counterarguments

People opposed to privatization have used certain arguments to support their position. According to one such argument after privatization there will be an increase in the price of the services provided formerly by public enterprises since it will have to include a profit mark-up to cover the distribution of dividends to shareholders. However, this argument ignores the fact that the increase in efficiency and reduction in production costs which in most cases result from privatization can outweigh the effect of the inclusion of a profit margin. If a government thinks that there are serious reasons for the prices of certain products to be kept low it can offer special subsidies for them.

Another argument against privatization is that certain public enterprises are monopolies and their transfer to the private sector will endanger consumers' interests. But as mentioned previously when a government decides on the privatization of an enterprise with monopolistic power it must take measures to increase competition and check the firm's monopolistic power and its ability to raise prices. Such measures were used extensively in Britain in the case of privatization of monopolistic enterprises.

Opposition to privatization has been based also on the argument that the government should not sell off valuable public assets. The assets, however, are not lost for society but are better utilized. Another argument with great appeal to labour is that privatization will cause reduction in employment. Privatization is usually followed by restructuring and indeed a significant part of the workforce may become initially unemployed because public enterprises employ as a rule more people than are needed for their efficient operation. This causes waste of valuable productive resources and should not be used as an argument against restructuring. The state must take measures for creating alternative employment opportunities for those who will lose their jobs. The problem of structural unemployment could be tackled through other means.

Finally, the argument is used that public enterprises will be bought by few local capitalists already dominating the economy, who will increase their economic and political power, or by foreigners who will thus gain control of the economy. Such dangers can be avoided if it is specified in advance that no one can own more than a given percentage of an enterprise's shares and if the state uses the practice of the "golden share" mentioned earlier.

It must be emphasized that although privatization can bring significant benefits to an economy it does not constitute a panacea or a magic formula for solving all the problems of enterprises which are now part of the public sector. Success depends not only on the form of ownership but also on improvement of management and increase of competition. The form of ownership of public

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enterprises has adverse effects on efficiency mainly because it influences the way they are managed. But it does not follow that the change in ownership will inevitably guarantee management efficiency and increase in competition. To protect the interests of consumers privatization must be accompanied by measures leading to a more competitive environment. When this is not possible due to the nature of the operation special arrangements must be made for preventing the privatized firms from exploiting their monopolistic position.

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TRANSFER OF TECHNOLOGY VS. TRADE IN SERVICES

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1. Introduction

In the course of GATT Uruguay Round there has been a considerable controversy embodied in the basic negotiating approaches, —the overwhelming trends towards the liberalization in services, together with the abolition of existing legal barriers and the principle of transparency of the national legal regulations, whereas on the other hand and at the same time, straightening the protection of the intellectual property rights.

From the stand point of services, their structure and new trade opportunities, there is an inevitable link between them and the new and modern, high-leveled, technology, such as computer and communication technologies. Information, computer and communications services are an integral part of international banking, insurance, tourism and construction services. The impact of high technology is even broader, being one of the most important factors of production. Services today are firmly linked to rapidly evolving technological transformation which is led by the industrialized countries. To that end, the tendency of facilitating the trade in service, should incorporate also the question of facilitating transfer of technology as well as computer software, both being the protected categories under intellectual property regimes.

In the light of the technological dependence between industrialized countries and developing countries, the stiff protection of the intellectual property rights could serve only to increase this dependence of the developing countries. Since developing countries are on the different level of technological development, deterioration of conditions for acquiring new technology by strengthening the legal requirements on intellectual property would only indicate further intensification of rigorous technological domination and control by industrialized countries. This would also inhibit possibility for their sustained development.

2. The issue of intellectual property

The protection of intellectual property rests on the presumption of fair balance between the costs and efforts of the research, development and marketing, invested in the intellectual property, on the one hand and the encouragement of further development, on the other. Therefore, the protection

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of intellectual property should provide fair reward and exclusive right to the owner, but at the same time it should not be prejudicial, but be encouraging to new innovations and creativity.

To that end the protection of intellectual property is based on the monopolistic rights of the owner of the same, within the limited period of time. After the expiry of this period the protected category is made available to society at no cost. Herein is included the intention of the legislator to secure a fair balance between the individual and public interests.

To fulfill such intention is not an easy task. It seems rather obvious that in different economic circumstances and at a different level of technological development different rules are to be adopted in order to achieve such an aim. The public interest is unequal in the developed society and the society in development. Also, the question of what constitutes the public interest in one country should definitely be the main question of the national jurisdiction.

Confirmation of such presumption is to be found in the present international legal regimes of intellectual property (Paris Convention, Bern Convention and Universal Convention)[1] that set up only the basic principles of protection and regulate solely the minimum of rights that should be protected in each country, while leaving enough scope for national jurisdictions to finalize and adapt national laws in accordance with their own needs and interest, within the existing internationally agreed framework.

Nevertheless, today it is an overall recognized prerequisite that the protection of intellectual property needs to be ensured in each national jurisdiction. In absence of the same, the innovations and creative works would not be available at any cost, and there would be no financial incentives to produce them. That would be obviously prejudicial to further development in general terms. It is to say that the creative activity needs to be encouraged while it is protected.

However, too weak a protection is not appropriate at the same *ratio* as a too rigid one-both protections can lead to the "need" for their violation. Any violation or abuse, on a permanent basis, of the existing legislation is a serious indicator of legislation deficiency. Too weak protection, as is understandable *per se*, enables violation, as the safeguards alone are not sufficient. Too rigid protection has also in the past proved to be inappropriate with violations frequently occurring as the result of the mere need to obtain what is otherwise practically and legally unobtainable. Therefore, the excessive protection of the intellectual property rights may well lead to abuses, and what is even worse, has always the inherent potential danger of restraining the competitiveness, being the most valuable factor of development in general.

If, for example, the computer software is protected by copyright law, within

[1]See Paris Convention for the Protection of Industrial Property (1883), last amended in Stockholm 1967, Bern Convention for the Protection of Literacy and Artistic Works (1886), last amended in Paris 1971 and Universal Copyright Convention (1956).

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the life time of the owner and 50 years after and if there are strict restrictions against copying, including criminal ones, on the presumption in favour of the copyright owner, or if the patent protection is to be modified as to alleviate patentability of the same, having then protected not only expression but the underlying idea within a 20 years period, what are the chances of the development of infant computer software industry in developing countries?

Unfortunately, those are exactly the evolving demands of industrialized countries.

3. Recent trends towards the new intellectual property regime

During the past several years USA, holder of a large number of patents and copyright works, started with complaints in regard to insufficiency of intellectual property protection in many countries acquiring American innovations and creative expressions. This was the beginning of whole activity in favour of the protection of the owners of high technology. The series of actions were undertaken against the alleged infringers. Concerned with the protection of high technology, particularly computer software, semiconductor chips, telecommunications and biotechnology, as well as pharmaceutical, food and chemical sector, the US had modified its Trade and Tariff Act in 1984 and the Ominbus Trade and Competitiveness Act in 1988.

Pursuing these legal grounds, United States started with application of its own laws beyond its territories. Claiming that according to its laws certain actions done on the territory of the other country are illegal, they took upon themselves the right to unilaterally impose measures of retaliation against such countries. This activity has been entirely out of the ambit of any multilateral agreement, and even by GATT panel condemned as violation of GATT national treatment principle.

However, the question of the so called trade-related intellectual property appeared as a separate question (TRIPs) on the agenda of the Uruguay round negotiations, as agreed to by all Minsters at the Punta del Este opening session in September, 1986. The stated objective was:

> "to develop a common set of rules and disciplines which will provide adequate and effective protection for intellectual property rights, while ensuring that these rights do not disrupt legitimate trade."[2]

The problems of serious trade distortions emanated by inadequate and ineffective intellectual property protection, emphasized by the industrialized countries, should be solved through adoption of new basic principles on intellectual property. While proposed by themselves, they should be tied to all other GATT principles and applicable to all GATT members. Such a proposal called "Basic Framework of GATT Provisions on Intellectual Property" was submitted in 1988, by European, Japanese and United States business communities.[3]

[2] See John M. Curtis, *Intellectual Property and International Trade*, p. 36.

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The Basic Framework of GATT Provisions on Intellectual Property is prepared by The IPC-Intellectual Property Committee, a coalition of 13 major US corporations, UNICE—Union of Industrial and Employers' Confederations of Europe, composed of 33 memeber federations from 22 European countries and KEIDANREN—Japan Federation of Economic Organizations, a private, non-profit economic organisation representing virtually all branches of economic activities in Japan.

The multilateral rules in this field sought for by these countries involve higher level and broader scope of protection of intellectual property rights than it exists now in most of the countries as well at the international level. They call for effective enforcement of such protection, nationally and internationally, through the consultation and dispute settlement procedure within the GATT framework. Furthermore, the application of basic GATT principles, such as the most favoured nation treatment, national treatment and transparency, should be correlated with the adoption of intellectual property protection rules.

4. Legality of the requirements at issue

The Basic Provisions concept, mentioned above, suggested the adoption of the unified rules on intellectual property in the form of multilateral code—GATT Code on Intellectual Property, based on the following rules:

> "Contained both in the laws of those countries which engage in most of the trade in products embodying intellectual property and in international intellectual property conventions that contain adequate standards of protection."[4]

Herein, it is hard to overlook the inherent intention of such proposals. The new code of intellectual property should contain already existing international intellectual property rules supplemented with national rules of the industrialized countries.

The code should have superior legal effect than international conventions in that domain, due to its inherent implementation mechanisms and procedures, and due to the consequences that a country may have to bear if found to be in breach of GATT rules in general. Since the effective dispute settlement procedures should be incorporated in individual national legal regimes, the GATT's own dispute settlement procedures are to be straightened also.

The existing international rules, if supplemented by the rules of industrialized countries, become in essence more rigid rules to be applied internationally. According to the logical principle that more rigid rules incorporate the weaker ones, the national regimes on intellectual property protection of industrialized countries should in this case be in force.

[3]Bundesverband der Deutschen Industrie e.V., Dokumentation.
[4]Basic Framework of GATT provisions on Intellectual Property, I. Introduction and Summary, page 8.

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To put it in another way, the unilateral actions of US, being since yesterday illegal would, if case be, tomorrow perfectly legal. Could it be thus wrong to perceive that in order to legalize its own illegal actions in the future, the US inaugurated the initiative for the international adoption of American rigid rules on intellectual property protection?

5. TRIPs vs. Transfer of technolgy

According to report on the status of work in the negotiating group of Trade-Related Aspects of Intellectual Property Rights, including Trade in Counterfeit Goods (TRIPs), in the framework of Uruguay Round GATT negotiations, its revised version from 1st of October 1990, two opposite main streams are included. The one represents the views and suggestions of industrialized countries while the other represents the same but prepared by developing countries.

In the view of transfer of technology, the most important sections are dealing with copyright and related rights (whereas the protection of computer software is suggested), patents and acts contrary to honest commercial practices including protection of undisclosed information as well as sanctions on enforcement of intellectual property rights, dispute prevention and settlement.

The Basic Provisions are incorporated in the proposals of industrialized countries supplemented with a separate section including protection of undisclosed information. Therefore, the patented technology and computer software should have been, according to these proposals, additionally protected in domestic law by providing the legal means in order to prevent disclosure of information kept as secret by the person lawfully in control of it. Furthermore,

> "parties shall not discourage or impede voluntary licensing of undisclosed information by imposing excessive or discriminatory conditions on such licences or conditions which dilute the value of such informations."[5]

Therefore, this provision although at the first glance might seem to promote the freedom of the conclusion of licence contracts to the effect of encouraging the transfer of technology, essentially implies a completely opposite concept. The real meaning, not to be overlooked, is the promotion of licence contracts containing undisclosed information. Therefore, the technology should be transferred "freely", through the contracts unlimited by the constraints incorporated in the national laws, but only after the recognition and reinforcement by the same national jurisdictions, of its severe protection both as intellectual property and as undisclosed information. These provisions actually reflect the attitude of industrialized countries directed to further restraining the transfer of technology. The same concept is ascertained by the fact that the proposals of the

[5] Part III, Section 7, article 2A.3 of the revised version of Doc. MTN.GNG/NG11/76, from 1 October 1990, GATT Secretariat.

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developing countries, which include the provisions in favour of liberalizing the transfer of technology, are neglected by the industrialized countries, so far.

The final outcome of TRIPs negotiations is still questionable, whereas, what is definitely unquestionable in connection with this issue, is the role of the outcome of TRIPs negotiations in the further processes of global economic development, particularly the economic development of developing countries.

6. Concluding remarks

Although there is no multilateral discipline in the domain of intellectual property rights, arising from the different degree of the protection in individual countries, as well as from the deficiency in enforcement of the existing rules in the practice, there is absolutely no reason and no excuse for adjusting it by mere upgrading of genuine national provisions to international level. The internationally acceptable rules should be instituted to serve not only limited number of countries, but to the greatest possible extent, all countries. In this sense, such rules must be elaborated with due regard to the interests of the majority.

Being a relatively new issue to be negotiated in the ambit of GATT negotiations as well as in the service sector, and being a component part of them, the issue of intellectual property should have been included in negotiations related to trade in services. In the light of overall liberalization of trade in services, the question of intellectual property should be negotiated in the same manner, based on far more tolerance, nondiscriminatory and unprejudicial terms to developing countries.

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PROSPECTS OF INTRA-REGIONAL TRADE AMONG SAARC COUNTRIES

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Today almost all the countries must accept the fact that they are part of the world economy. No country can escape its role in the system of interdependent trading nations. It is still a debatable point whether the degree of inter-dependence among nations is increasing or not. But it is a fact that the world trade has grown exceptionally fast in the post-war years. On the whole, the forces working for economic interdependence among nations seem irresistible.

It is a fact that the rich nations are getting richer, while the poor nations are trying to stand up on their own legs. The world as a whole has grown in constant dollars at 4.7% a year on an average during the period from 1950 to 1980. The fastest-growing group of countries are the middle-income nations, including some of the less populous OPEC countries and also countries such as Argentina, Brazil, Egypt, Greece and South Korea. These countries had about 5.8% annual growth on an average. Next in the growth race were the centrally planned economies including China, Soviet Union and the East European nations, whose average annual growth rate was about 5.4%. On the other hand, the poorest nations, such as Afghanistan, Bangladesh, Ethiopia, India, Indonesia, Pakistan etc., had only 3.9% as their annual growth rate, while it was hardly of the order of 1.5% as far as growth of their per capita income is concerned. Thus, though the poorest nations are trying their level best to wriggle out of the rigmarole, their income gap with the rich nations is gradually widening.

One possible way to accelerate economic growth of the developing countries is through regional cooperation. Enhancing intra-regional trade is an important instrument of this overall approach. The desirability and feasibility of South-South Cooperation is no longer a matter of conjecture. Countries of the South are not uniform in their level of development or resource endowment. The dynamic complementarities among the developing countries in resources, skills, technologies and market opportunities have opened new vistas of opportunities among themselves. Well-conceived and properly implemented programmes in that direction would help countries of the South to redue their dependence on the North as well as their vulnerability to external trends and pressures. South-South Cooperation has acquired definitive form and content during the past decade in the action programmes adopted at the successive NAM summits

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and by the group of 77 at the UN. The declaration and the programme of action on the New International Economic Order (NIEO) adopted by the UN in 1974, the UN Conference on Technical Cooperation in 1978, etc., are the stepping stones towards establishing a framework of economic cooperation among developing countries.

A good example of how the developing countries have learned to act together for mutual benefit is the establishment of a Global System of Trade Preferences (GSTP) among developing countries promoted by the 77 countries. This was in response to a crisis situation created by the fact that while the developed countries were dumping their manufactured goods in the markets of the developing countries, they were raising protectionist barriers against exports from the latter. The only way out of the crisis is to promote trade among the developing countries themselves. A major hurdle for South-South Cooperation seems to be the persisting information gap among developing countries of the potentials and possibilities of cooperation, the available skills, resources and needs in various sectors. This has quite often resulted in developing countries importing from developed countries when their needs can be met at much less expense and more appropriately from among their own fraternity.

India has been particularly active in forging economic links with the developing countries. Its trade with other developing countries has expanded at a faster rate than with the developed countries. Between 1975–76 and 1983–84, India's exports and imports with developing countries grew at 14.3% and 18.4% annually, whereas the overall growth rates of exports and imports were 11.8% and 14.7% respectively. The South Asian Regional Cooperation covers important sectors of economic cooperation including agriculture, health, population, meteorology, postal services, rural development, scientific and technological cooperation, sports, arts and culture, telecommunications, transport, trade etc. The first summit held in Dhaka in December, 1985 established an organisation known as the South Asian Association for Regional Cooperation (SAARC).

The South-South Cooperation, especially South Asian Regional Cooperation is a new platform which has provided a new horizon for regional cooperation in South Asia. Such a forum as is evident from the various deliberations of SAARC's meetings, has identified new areas of cooperation which will go a long way in strengthening the cooperation of these member nations.

SAARC came into being at the first South Asian Summit held in Dhaka in December, 1985. The fundamental purpose of the organisation is to provide for active collaboration and mutual assistance among Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka in the economic, social, cultural, technical and scientific fields. It is an arrangement to promote and strengthen individual and collective self-reliance in South Asia to contribute to mutual trust, understanding and appreciation of one another's problems.

Let us now try to understand the broad characteristics of SAARC countries including the broad areas for economic cooperation.

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TABLE 1
COMPOSITION OF GDP IN SAARC COUNTRIES IN 1984 (IN % OF TOTAL)

Country/Sector	Agriculture	Manufacturing, Mining & Electricity	Others
1. Bangladesh	53.3	7.3	39.4
2. Bhutan	71.2	4.5	24.3
3. India	34.0	20.6	45.4
4. Maldives	29.3	6.7	64.0
5. Nepal	63.0	5.3	31.7
6. Pakistan	24.4	24.6	51.0
7. Sri Lanka	26.7	21.0	52.3

Source: World Development Report (1987), Washington.

It may be observed from the foregoing table that except Pakistan, India and Sri Lanka, where the secondary sectors share is in the range of 20–25%, all other countries of the SAARC region are hardly having their share of industry in the range of only 4–7%. This shows that they are mostly dependent upon primary sector.

TABLE 2
POTENTIAL AREAS OF SECTORAL COOPERATION AMONG SAARC COUNTRIES

Country	Agriculture	Energy	Manufacturing	Others
1. Bangladesh	H	L	M	L
2. Bhutan	M	L	M	H
3. India	H	H	M	H
4. Maldives	L	H	L	L
5. Nepal	H	M	M	H
6. Pakistan	H	L	L	M
7. Sri Lanka	L	L	H	H

Note: H = High; M = Medium; L = Low

Sources: Identification of Sectors & Product Groups for Economic Cooperation in South Asia Report (Mimeo) by Arif A. Waquif, Administrative College of India, Hyderabad (India).

The above mentioned study on the basis of structural and sectoral growth perspectives, has suggested the regional economic cooperation in the following areas:

(i) agriculture is likely to be more benefical to Bangladesh, India, Nepal, Pakistan and Bhutan;

(ii) Energy is likely to be more beneficial to India, Maldives and Nepal;

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(iii) Manufacturing is likely to be more beneficial to Bhutan, Sri Lanka, Bangladesh, India and Nepal;

(iv) "Others" sector is likely to be more beneficial to Bhutan, India, Nepal, Sri Lanka and Pakistan.

The trade flows among SAARC countries constitute a small fraction, which is of the order of 2–3% of their overall trade. In the recent past, these flows have been fluctuating but showing a rising trend.

India's state trade organisations play a more significant role in her South Asian trade than in her trade with the rest of the world. However, they are involved more in exporting finished and semi-finished goods to the SAARC countries than in importing goods from them.

TABLE 3
SOCIO-ECONOMIC INDICATORS OF SAARC COUNTRIES

Country	Population (Millions)	Per capita Income (US Dollars)	Adult Literacy	Life Expectancy at Birth (Years)	Infant Mortality
1. Bangladesh	101.5	135	26	46	136
2. Bhutan	1.4	96	NA	44	150
3. India	762.2	193	36	52	123
4. Maldives	0–15	418	NA	NA	NA
5. Nepal	17.0	145	19	44	150
6. Pakistan	99.2	360	24	50	126
7. Sri Lanka	16.4	340	85	66	44

Note: Based on 1985 figures.

Source: World Development Report (1987)

It becomes clear that all the SAARC countries, irrespective of their size, population and industrial background, belong to the lowest strata of the developing countries of the world. The per capita annual income of Bhutan was as low as $ 96 while the highest per capita income of the region, $ 418, was enjoyed by the smallest country of the region, namely, Maldives. India's per capita income was as low as $ 193, while Pakistan and Sri Lanka had about $ 350.

The present international economic situation characterised by stagnant economic growth, recessionary conditions and protectionist tendencies in the developed countries has seriously affected the growth prospects of the developing countries. The worsening terms of trade, acute balance of payments crisis and debt burden of the UDCs have further crippled the potential economic growth of these countries. Under these circumstances the developing countries thought that it is better to unite themselves first and then negotiate with the developed world on equal footing.

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Although South Asia as a region is considered poor by way of conventional economic indicators, colonialism and imperialism of yester years explain at great length its present economic plight. *While the population of the region is nearly 20% (about 900 million)* of the world population, its share in the world GNP is little less than 2%. As far as world trade is concerned, the share of South Asia in world exports was a mere 0.6% (about $ 12,000 million) in 1980, while its share in world imports was 1.2% (about $ 24,000 million).

Areas of Cooperation

One of the major areas of cooperation which needs to be considered under the purview of SAARC as a priority is the trade sector. Although there may seem competitiveness in the area of trade, there is scope for expansion of intra-regional trade in the SAARC region. More specifically, the trade in certain commodities, which are being exported by some of these countries, can direct the region's efforts at collective self-reliance. For example, India's main items of exports of non-traditional items such as engineering goods and chemicals offer vast opportunity in the region.

TABLE 4
EXPORTS AS % OF TOTALWORLD EXPORTS OF TEA

Country	1973	1979	1982
1. India	28.4	23.3	28.6
2. Sri Lanka	29.9	25.2	21.0

It may be noted that nearly 50% of the world's total exports of tea was from India and Sri Lanka.

TABLE 5
EXPORTS AS % OF TOTAL WORLD EXPORTS OF JUTE

Country	1973	1979	1982
1. Bangladesh	—	70.3	81.4
2. India	6.1	1.3	4.1

Source: UN Commodity Trade Statistics, (New York, UN 1971–84).

It was a fact that around 86% of total jute exports were from these two countries.

There is no denying the fact that India can play an important role in the process of regional cooperation in this region. India is not only big in size and rich in resources but also has a strong industrial base. For example, India is the only exporter of engineering goods in the SAARC region. Similarly, the technology base of India is quite advanced in the region. Given the stage of economic cooperation among the member states, India can exchange its technology with the member countries thereby accelerating the process of

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economic development. This can take the form of readymade technology, technical consultancy and joint ventures on certain projects such as the construction activities in the region.

It is normally felt that economic cooperation in trade and industry is perceived as a sensitive area, primarily due to relative differences in the stages of industrialisation, institutional and technological developments among the SAARC countries. It is also partly due to their existing international trade, investment and aid relations with advanced countries outside the region, while some small countries like Pakistan appear to be apprehensive about being crowded out by these Indian groups.

The major items of exports and imports of the SAARC countries are as follows. There is every possibility of exchanging each other's goods to their mutual advantage:

Exports	Imports
1. Bangladesh	Manufactures
Jute goods;	Machinery and transport
Raw jute and mesta	Wheat
Readymade garments	Minerals, fuels and lubricants
Frozen food items and leather	Animal and vegetable oils and fats
2. India	
Agriculture and allied products	Petroleum, oil and lubricants
Minerals, fuels and lubricants	Fertilizers and chemicals
Textile fabrics and manufactures	Machinery and appliances
Gems and jewellery	Non-metallic mineral
Machinery and transport equipment	Manufactures, iron and steel
and non-iron manufactures	
3. Nepal	
Readymade garments	Petroleum products
Carpets	Machinery and transport equipment
Pulses	Textiles and yarn
Hides and spins	Chemicals and related products
Raw jute and jute goods	Iron and steel
4. Pakistan	
Cotton yarn	Machinery
Raw cottons	Petroleum products and chemicals
Leather	Transport equipment
Rice	Iron and steel and their manufactures
Fish and fish preparations	
Cotton cloth	
5. Sri Lanka	
Tea and mate	Foods and drinks
Clothing and accessories	Fertilizers
Crude fuels	Petroleum
Mineral fuels	Machinery and equipment
Crude rubber	Textiles

Source: RBI, "Report on Currency and Finance" (1985–86), Vol. I.

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It may be observed that the export baskets of India and Pakistan are relatively more diversified and include more non-primary products when compared to Banglasesh, Nepal and Sri Lanka. On the other hand, the import baskets of Bangladesh, Sri Lanka and Nepal include mostly consumer goods, while for Pakistan and India, the imports comprise of capital and intermediate goods.

As it is, the intra-regional trade of the SAARC countries is on the lower side. But there is a scope for more regional cooperation given the diversified nature of the member countries. The below given table records the intra-regional exports of the SAARC countries.

TABLE 6
INTRA-REGIONAL EXPORTS OF SAARC COUNTRIES (1986)

Sl. No.	Country	Exports (US $ million)	% of total trade
1	2	3	4
1.	Maldives	5.3	18.3
2.	Bhutan	N.A.	—
3.	Sri Lanka	58.4	5.0
4.	Nepal	56.2	38.7
5.	Bangladesh	53.9	6.1
6.	Pakistan	108.5	3.2
7.	India	224.0	2.2

It becomes clear from the foregoing table that the intra-regional exports of Nepal in 1986 was as high as 39%, followed by Maldives whose exports within the region was around 18%. Both for Pakistan and India, this level was as low as 2.3%. In future, there is a good scope for an expanding level of intra-regional trade which may pave the way for an overall regional cooperation.

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SUSTAINABILITY AND THE INTERESTS OF THE POOR *

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Sustainability of projects is one of the current interests of World Bank and a ot is being written and talked about in journals and national and international eminars.

The simplest definition of sustainability has been provided by the Operations valuation Department of the World Bank where it is defined as "the ability of project to maintain an acceptable level of benefit flows through its economic fe". It may, of course, be expressed in terms of internal rates of return in conomic or financial terms or it may be expressed in qualitative terms, leaving side the dispute whether all qualitative terms can be converted into some pproximate physical indicators too.

We do not question the importance of sustainability as a concept or its sefulness in asessing the ultimate impact of a project. But it should not turn nto a mere fad and a slogan and thus conceal the fundamental reality of the xperience of development to the people. The most important question is: Development is for whom? Who do actually benefit? And to what extent? The extent' question and the 'who' question can also be viewed over different time cales—this generation or the coming generations?

Sustainability as defined and propagated by the World Bank is operational ustainability—smooth and continued functioning of the project to give the benefit flows'. It is an important and useful managerial approach. It is the usiness point of view; owner wants that his machine continues to work moothly over life, owner wants that interrelated and interwoven machines—uite a number of them—, materials and men continue to work and continue to ive results. This is not an illegitimate point of view. Donor's point of view is imilar to that of an owner. Funds provided by the donor must continue to give esults over the entire life period of a project founded by the donor. Nothing bad r unnatural about it. But there must be and *there are* questions beyond the anagerial and operational approaches. It is to these, that we try to address. By ur insight into these questions, we believe questions of operational sus-ainability also get into better focus.

*The views expressed here are the personal views of the author. They have nothing to do with he institution he is working in.

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The sustainability issue does not question the parameters of the project. Supposing all the projects become sustainable in a complete sense; does that ensure that interests of the poor will get served? Does that ensure that regional fair-play has been achieved? Does that ensure that generational social justice has been the end result? A little reflection would show that such laudable objectives need not be achieved. They may not only be bye-passed but the end-result may be 'negative development', rather. If rich become richer and poor remain poor, Pareto-optimality, as an instrument or a guideline, cannot tell us that the society is actually "better off".

If sustainability of projects *alone* decided development, then let us, for a moment, take the world development as the point of view. If all projects in all the world, except India, were sustainable in complete sense, world development would go high, but would India, just on that count, reach a higher level of development? Certainly not, even if we assumed India consists of only the poor people.

The most important question is *not* whether project is sustainable but whether it really benefits the poor. In the technicality of jargons and high-sound western concepts, slogans and policies like efficiency, management, technology and what not, we have always been relegating to background the real question of priorities of our development programmes and who get benefit out of it—the people; but which groups of people?

It is a queer way of looking, if we concentrated only on sustainability as ensuring benefit-flows. Let us take an imaginary ideal Indian situation at a local level—say a Primary School in the sector of education. Let the department of education, for sustainability, ensure that a viable project is planned and executed; maintenance funds are provided regularly; teacher attendance and pupil attendance is ensured ideally by a committed band of inspecting and supervisory personnel; let us also ensure that quantity and quality of education as an end-result is certainly as planned. We thus 'ensure', as an ideal assumption, that everything on 'sustainability' aspect is o.k. It still does not ensure that education has reached the poor people! Our convent schools and public schools are all o.k. on sustainability grounds. Now do they help the poor? Sustainability approach *may take the deeper look* in, by asking whether the benefits flow to the people *intended to be helped* and not just the totality of flows, but if the original priority intention itself was for groups other than the poor people, then in spite of productivity, efficiency, and sustainability criteria being satisfied, the poor may remain poor.

Now how to ensure (A) that "sustainable projects are really meant to help the most deserving people" *and* (B) that projects meant for poor people are really sustainable. These are two separate questions. The second one takes us to examine the question within the framework set forth by the World Bank. Let us take, therefore, the second question.

One aspect of it is the general operational question of selecting, designing and implementing the projects and managing the public expenditure and

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administratively ensuring that all projects, whether for poor or for others, are sustainable. We do not intend to add more on it—so many things are obvious but are neglected because of inefficiency or lack of motivation of implementors. But why is there lack of efficiency and lack of motivation? Source of that may be looked in at two levels:

(i) At macro level, who decides, designs and really implements the policy?

(ii) And at micro level, who owns, operates and is responsible for the projects?

The macro-level examination takes us to the class question. The projects are formally designed and decided by higher level bureaucracy and elected chief executive and they are implemented by middle level and lower level bureaucracy. The poor have a little hand in it. They really look upwards to 'government' as 'outside benefactors' who 'bestow' them with development. For them, whatever is 'bestowed' in the first instance is a positive gain. Later on in its operation whether the project works, or is efficiently managed, or is actually *sustainable* they hardly bother about it or even know about it. This is because, everything is the responsibility of the government-ministers as "givers" of projects and government servants as "operators". People are just "beneficiaries". Ironically, this is exactly the title used for the people. The elected executive, the ministers, on the other hand, want to *add* projects, schemes and programmes over the previous pile so that there is a greater number of "inaugurations", more publicity and more vote-catching. Operating the existing schools, dispensaries, or roads hardly makes a news. Hence we have a rush of programmes, schemes and projects whenever a new government takes over. Sustainability of new or old projects is hardly cared or talked about. In fact, the project selection itself is on the basis of "inaugurability" rather than sustainability!

At micro-level the "ownership", operation and responsibility of the maintenance of projects continues with the 'officials' of the line departments who initiated the projects. Since the governmental system works in hierarchy and higher officials hardly bother about the maintenance, operation and sustainability, the officials down the line who actually have to operate and "sustain" the projects, become equally slack. The system itself is not geared to look after an on-going programme. For a village dispensary, school or road, typically, the maintenance, workability or sustainablity comes to forefront only when dilapidation is obvious to naked eyes or, because of lack of concomitant inputs like medicines, staff or books/stationery etc., the concerned projects come to a *standstill*. New estimates are then made to prop them up.

Why is it so? Because the concerned authorities and departments do not have to have stakes in it. Users or the "beneficiaries" are not involved at any stage. If at all, their involvement is to "approach" the authorities. Repeated approahces, delegations and petitions are resorted to by the people to get an on-going project working, what of sustainability.

What is the way out?

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The maintenance and sustenance at field level suffer from:

(a) operational inefficiency due to lack of ability/competence of the worker or his/her lack of interest in the work,
(b) lack of supervision and inspection by higher officials,
(c) lack of timely availability of components which wear out or break out,
(d) lack of 'working' funds or non-existence of personnel that must 'operate' and maintain the works.

'Funds' question is solved by adding special maintenance funds to the initial cost-component of the project. It requires a little more care and sophistication at the conception and planning stage. Components, in most cases, are locally available especially for the small-scale field level projects/schemes in the social welfare sector. The 'availability' question, therefore, takes us back to 'competence' and motivational question and 'proper inspection' and 'supervision' of these erring officials. But is it not that at if erring officials are not being supervised or inspected or controlled by the higher officers, then higher officers *themselves* are either inefficient, lacking competence or lacking interest and motivation! Generally speaking, officers complain about the lower staff and the latter do the same about the officers. Both are, in fact, right! The common defence of both the classes for their own faults is "we are already overworked". It is quite strange, however, that all independent observers of government machinery opine that it is over-staffed! Over the period, swelling of functions and schemes by government and swelling of personnel are too well known. Which has lagged behind?

How to have the efficient and committed workers who sustain the projects at the lowest level?

The way out is to make *the people* responsible for 'inspection' and 'supervision' of the officials who look after the projects at field level. It is time that masters are given the *role* and *power* as masters. Until now "masters" have been "beggars" to the "public servants"—both in terms of funds and in terms of service. The suggested role of people is not as an outside observer or watchman to request or report to the "highers" in hierarchy. What is suggested is that people have actual, legal and administrative *powers* and *functions* to supervise and inspect the lower level functionaries. Design, planning and formulation and initial implementaion of schemes, programmes and policies shall remain with the technical and administrative bureaucracy. People shall have only *consultative* role in that. But supervision of functioning projects/schemes must be *transferred* to the people.

The big question is 'modus operandi'. There could be supervisory bodies at local level, block level, district level and state level. They may be called Local Supervisory Body (LSB), BSB, DSB and SSB. Dominant role *within* the body should be of users. Local elected member (representative of Gram Panchayat), MLA, MP and concerned Minister could be the Chairperson and Primary School Teacher, Middle/High School Teachers could be members at other levels. *The 'functionaries' adminstratively designated as responsible for maintenance* of

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projects/schemes must, as on regular duty, *report* to these bodies at the meetings *fixed* for say on last Friday of every month (holiday or no holiday!). There should be a panel of Chairpersons and the absence of *any person* should not be an excuse for not holding the meeting. The supervisory bodies, in order to be working and functional, should not have a total of more than five members. These supervisory bodies must *report* for the projects as well as for persons responsible for keeping the projects functional and sustainable. The annual report of the body should form a part of the confidential report of the official concerned.

The provision of maintenance funds and designation of persons responsible for maintenance should be part of the initial formulation of the project itself and the supervisory bodies must not be turned into forums for demanding more funds and personnel. Once these bodies have local teeth, the functionary workers shall have to 'satisfy' them for their ability and motivation. It would be their *responsbility* to arrange and get components which wear out or break down. It is time that, instead of keeping big stores and staff to account and issue the store-items, market system is utilised. Let there be maintenance funds for market-purchase and financial supervision could be exercised by the supervisory bodies.

At a later stage in time the supervisory bodies could be given the *ownership* of the projects and the necessary development funds. The functionaries and maintenance staff could then be 'employed' by them or contract given in the market. Development of a service market system is essential for it. It can be tried experimentally even now at certain centres.

Let us come now to the first question of having sustainable projects for the most deserving people.

It takes us to the question of priorities of development in the broadest sense. The poor, for whom the pojects are required to be made, must be at the decision-making level as a first preference. The people must have the real power, only then the projects would be those that really help them. Otherwise we will continue to build only the "inaugurable" projects—a park with night lighting system, while the poor are starved of household energy and drinking water. These city-oriented projects continue to show the class bias of the project formulators and their talking to the poor from their self-created high pedestal. It is not our contention that presently the decision-makers are antipoor but they are certainly not able to understand, comprehend and realize the fundamental problems of the poor. They have not devised policies, schemes and projects that are *sustainable* for poor. It is strange to note that dirinking water, toilets, medicines and doctors, black-boards and teachers, roads and household energy are not yet available in our villages—what to talk of bringing agricultural and industrial transformation in the remotest villages! Who is responsible for it? Lack of funds, lack of growth itself or lack of commitment to priorities that people need? Even *employment* cannot be *created* by the governemnt. What is

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required is enterprise and opportunities? Can people have enterprise and economic opportunities when they don't have the vital basic needs satisfied?

The villages and higher-tier bodies in the long run, *shall have to be given the power to decide projects* while technical and administrative personnel present to them different alternatives and their implications. Power, not only political, but economic power, must come to people at the root level. Only then we can have *sustainable development.*

Shall the present power elite shed off power in favour of people?

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EXPENDITURE AND RECEIPT: TESTING FOR CAUSALITY IN MUNICIPAL FINANCE

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Urban local bodies all over the world provide social, cultural and physical needs of the citizens. However, many of the studies tell us about acute shortage of various kinds of urban public services.

The acute shortage of urban public services has been explained from two different points of view:

(1) The municipal corporations in India perform various functions under number of restrictions such as ceiling on the amount of permitted taxes and debts, restrictions on the sources of revenue and sanction of budget in special cases. It implies that the total receipt of the municipal corporation determines the expenditure of municipal corporation and thereby various services provided by municipal corporation.

(2) It has been argued out that the financial requirements did not increase very much due to failure of expenditure policy to be dynamic and expansive. This suggests that the proposed expenditure of municipalities play an important role in determining the total receipt of municipalities.

In the light of the above mentioned arguments, the present paper attempts to examine the direction of causality through Granger test and Sims test considering 18 municipal corporations in India. In other words, it is attempted to examine whether the causality runs from expenditure to receipt or from receipt to expenditure.

In majority of cases we observe either (a) unidirectional causality from total receipt to total expenditure, or (b) bidirectional causality i.e. receipt and expenditure are dependent on each other and this also does not make us reject the hypothesis that higher spending levels result from higher revenue levels.

Introduction

Urban local bodies all over the world are primary agencies for meeting social, cultural and physical needs of the citizens. They provide for a variety of services and public utilities for the convenience, healthy living and welfare of the individual and the community. The growth of trade and industry and of the city in general also depends upon efficient performance of municipal services.

It is quite well known that our major urban areas have been experiencing fairly rapid demographic growth. Various studies[1] tell us about acute shortage of all kinds of urban public services such as water supply, schools, roads, public health facilities, housing, hospitals and medical facilities. The cities invariably have a sizeable portion of their population living in slums and on pavements. To

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meet this growing requirement of urban services, the municipal corporations require sufficient resources. Municipal bodies in India are proverbially deficient in financial resources and, therefore, their capacity to contribute to or develop the well-being of the citizens is strictly limited. Of course the complaint of inadequacy of financial resources of local bodies is made even in Western countries but when people in these countries "talk of inadequacy of resources, they mean inadequacy in respect of public conveniences and luxuries. In our country, however, when we talk of inadequacy of financial resources, we mean inadequacy in regard to the barest necessities of corporate life, such as roads, water supply, sanitation and medical relief".[2]

Moreover, the municipal corporations in India perform various functions under a number of restrictions such as ceiling on the amount of permitted taxes and debts, restrictions on the sources of revenue and sanction of budget in special cases, requirement of prior approval of state government in the sphere of finances are some of the forms of controls exercised by the state government which put heavy odds in their smooth functioning.

It has been pointed out by Zakaria Committee[3] that municipal authorities have been relying mostly on their domestic resources and the role of state assistance is marginal. The share of grants from state in total revenue of municipal corporations is not significant.

A study by R.N. Tripathy[4] reveals that the expenditure of municipalities in real terms did not increase significantly mainly because of two factors: (a) The municipal bodies did not follow any dynamic policy of expansion of their activities and this was partly due to the fact that the central and state governments did not have any conscious and well formulated plan of economic development.. Therefore, any increase in expenditure was undertaken not in the context of a policy of planned development and planned utilization of resources and perspective planning but on the basis of annual municipal budgets the size of which was determined primarly by short term view of the availability of resources. (b) Another important reason that contributed to slow increase in municipal expenditure was that the resources of municipalities increased at a very low rate.

A study by Johannues E. Linn[5] reveals a steady decline in per capita expenditure in real terms. One plausible explanation could be that inadequate revenue mobilization restricted the finances for services expansion and thus had a dampening effect on per capita services actually provided.

As the tax structure of municipal bodies is regressive, it has a number of significant characteristics. In the first place, it lacks the element of built-in flexibility. The system is not only inequitable but also inelastic. In view of the lack of built-in flexibility in the tax structure, the municipal bodies have to make constant efforts to revise property tax and to increase the rate of taxes in order to capture a large proportion of increasing income for resource mobilization. But such an attempt comes against a number of political and administrative

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difficulties. The revision of annual value involves delay, administrative expenditure and municipalities being popularly elected bodies it becomes dificult for them to raise the rates for fear of popular opposition and discontent. Moreover, maximum limits have been provided in the law beyond which the municipal bodies cannot raise the rates of taxes.

R. Sheshadri[6] argued out that the local bodies face constant financial stringencies and as a result thereof are unable to provide adequate services to the citizens. He opined that local bodies being creatures of states, they are outside the purview of statutory devolution of funds and, therefore, are wholly dependent in the matter of grants upon the discretion of state government. In the matter of sharing the funds available for investment through five years plans, most municipalities are once again outside the purview of the plans. Whatever the funds are available to the local bodies for capital investment are restricted to what each state government is prepared to dole out from its own plan allocations under various heads.

On the basis of the above discussion, one can say that the expenditure of the municipalities has been determined by their total revenue.

Study by R.V. Tripathy also shows that there was a lack of a dynamic tax policy for raising resources and this was partly due to the fact that the financial requirements did not increase very much due to failure of expenditure policy to be dynamic and expansive. This implies that the proposed expenditure of municipalities plays an important role in determining the total revenue of municipalities.

A study by R.D. Joshi[7] while analysing the role of budget in controlling municipal expenditure pointed out that the practice of inflating revenue estimate to match the estimates of expenditure is a vicious practice and is not peculiar to any particular municipal body but a common practice. The Morarka Commission Report has pointed out this fact specifically. The hidden effect of this practice is that the departments get more budget sanctions and they try to spend as much as they can in order to show better performance and for this, the departments resort to advances, so that their financial expenditure can speed up. They concentrate on the financial expenditure and not on the physical performance.

As per the financial rules, if there is sufficient budget grant available with the operating department, they can place orders. So actual expenditure incurred is in accordance with the inflated expenditure figure but actual revenue falls much short of the inflated revenue forecast, so the result is deficit, which municipal bodies finance by non-payment of government dues and public dues like octroi refund.

The general management framework of municipal government in India is radically different from that of upper level government. At the upper tiers of government, the system of financial administration is designed to subserve the

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needs of financial control in the legislative, executive and audit fields. No such explicit requirement is discernible at the municipal level.

State-local financial relationships have always been sour over years because, on one hand, the sphere of the municipal administration is enlarged by certain special Acts like shop and establishment act, the prevention of food adulteration act, the minimum wages act and also town planning legislation. Also scope and area of functions of local bodies has been widening in the wake of rapid urbanization but on the other hand, there is no matching effort by the state government to ensure adequate finances to those authorities. State government has paid less attention towards municipal corporation's financial problems. Several Commissions were appointed to study financial problems of local self government by both state and central government. And in spite of pressing recommendation by the committee to devolute more powers and tax resources to strengthen financial position of local bodies, state governments have remained unmoved. Though local bodies receive some grants from the government, its share in total revenue is negligible. Again grants are released in irretic manner and generally at the end of the financial year. Moreover, local bodies are required to seek prior approval of state government to raise loan and it is the experience that the amount sanctioned by the state government falls short by 40% or more of the amount demanded by the local bodies. As against this, central government and state governments have wide powers to collect required revenue through various sources.

In the light of the aforesaid discussion, the present paper attempts to examine direction of causality with respect to expenditure and receipts of municipal corporations in India. The study examines the relationship considering the information available regarding receipt and expenditure of municipal corporations of Ahmedabad, Surat, Bangalore, Dharwar, Baroda, Gwalior, Indore, Jabalpur, Raipur, Ujjain, Bombay, Nagpur, Poona, Sholapur, Lucknow, Allahabad, Varanasi, and Delhi, for which data are available. The present study examines the direction of causality throught Granger's[8] test using two different patterns of lag distribution. However, Sims'[9] test of causality is also used to find out the direction of causality of Baroda Municipal Corporation, where the information regarding receipt and expenditure is available for quite a long period of time.

Granger Causality

We use Granger's definition of causality to analyse the relationshp between expenditures and total receipt. The definition of causality in Granger is based upon the predictability of a time series. If forecasts of a dependent variable Y using both lagged values of Y and lagged values of another variable X yield better forecasts than forecasts solely based on lagged values of Y then X is said to cause Y. In other words, if

$$6^2(Y/\overline{YX}) < 6^2(Y/\overline{Y})$$

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then X causes Y.

The expression $6^2(Y/\bar{Y}, \bar{X})$ represents the variance of the forecast error of Y obtained from the lagged values of both Y and X and the expression $6^2(Y/\bar{Y})$ represents the variance of the forecast error Y based solely on lagged values of Y. Accordingly, if

$$6^2(X/\bar{X}, \bar{Y}) < 6^2(X/\bar{X})$$

then Y causes X.

Two-way causality occurs when simultaneity exists between Y and X. Causation runs from X to Y and from Y to X. Two-way causality occurs when

$$6^2(Y/\bar{Y}, \bar{X}) < 6^2(Y/\bar{Y})$$

and

$$6^2(X/\bar{X}, \bar{Y}) < 6^2(X/\bar{X})$$

We estimate the equations

$$X_t = \sum_{j=1}^{n} \alpha_j X_{t-j} + \sum_{j=1}^{m} \beta_j Y_{t-j} + U_t \qquad (1)$$

$$Y_t = \sum_{j=1}^{n} V_j X_{t-j} + \sum_{j=1}^{m} \delta_j Y_{t-j} + V_t \qquad (2)$$

Where U and V are uncorrelated and

$$E(U_t, U_s) = 0, \quad E(V_t, V_s) = 0, \quad E(U_t, V_s) = 0$$

for all $t \neq s$.

Unidirectional or one-way causation from X to Y is implied when the set of estimated coefficients on the lagged X variables in (2) is statistically different from zero as a group and when the set of estimated coefficients on the Y variable in (1) is not statistically different from zero.

Unidirectional causation from Y to X is implied when the set of estimated coefficients on the lagged Y variable in (1) is statistically different from zero as a group and the set of estimated coefficients on the lagged X variables in (2) is not statistically different from zero as a group.

Bidirectional causation between X and Y is implied when the set of estimated coefficients on lagged Y variables in (1) is statistically significant as a group and the set of estimated coefficients on the lagged X variables in (2) is also statistically significant as a group.

Sims' Test of Causality

An alternative way of testing the causal pattern is suggested by Sims. According to Sims' method, in order to find out causality from X to Y, one can regress Y on current, past and future values of X. X fails to causes Y in the

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Granger Sense[10] if in a regression of Y on current, lagged and future X, the latter coefficients are zero. It should be noted here that there are some econometric differences between the two tests (Granger and Sims) but the two tests basically test the same hypothesis[11]. For the purpose of this study, therefore, the following linear equations with distributed lags are postulated.

$$Y = F(x_t, \text{ past and future lags of } X) \tag{3}$$

$$Y = F(x_t, \text{ past lags of } X) \tag{4}$$

$$X = F(y_t, \text{ past and future lags of } Y) \tag{5}$$

$$X = F(y_t, \text{ past lags of } Y) \tag{6}$$

where Y refers to total expenditure/revenue expenditure of municipal corporation and X refers to total receipt of municipal corporation.

Since regression analysis on time series data is likely to exhibit autocorrelations among residuals, a pre-filtered treatment of all variables is conducted as suggested by Sims. Sims suggested a filter of $(1 - 0.752)^2$ where L and L^2 are lag operations. Essentially, variable X is replaced by X_t^*, where $X_t^* = X_t - 1.5X_{t-1} + 0.5620X_{t-2}$, so is variable y_t. Therefore, two degrees of freedom are lost to accommodate the requirements of white noise residuals.

In order to test the hypothesis that coefficients, for future values of independent variables, are jointly equal to zero or not, F statistics are calculated in the following way.

$$F = \frac{(Rss_4 - Rss_3)/df_4 - df_3}{Rss_3/df_3}$$

where Rss_3 and Rss_4 are the residual sum of squares of equations (3) and (4) and df_3 and df_4 are degrees of freedom in equations (3) and (4) respectively.

Moreover, for Granger test and Sims test, one also has to specify *a priori* the length of lag distribution of the explanatory variables. In the present paper two different lag patterns are chosen to describe the extent to which the results are sensitive to the pattern of lag distribution, i.e. the study examines the direction of causality considering (1) two paast and two future lags, (2) three past and three future lags.

Empirical Results

We apply the Granger causality test to annual observations on expenditure and receipt of 18 municipal corporations as mentioned earlier. The Sims' test of causality is also applied to the expenditure and receipt of Baroda Municipal Corporation, in order to examine whether results are sensitive to methodologies followed or not. The separate exercise has been carried out with respect to the direction of causality between total expenditure and total receipt on the one

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hand and the direction of causality between revenue expenditure and total receipt on the other hand. The total expenditure of municipal corporation consists of revenue expenditure and wages and salaries. The expenditures on wages and salaries of municipal corporations are generally affected by the decision of the state government. Because the revisions in the pay scale or the revisions in the dearness allowance by the state government bring about a similar change in the wages and salaries paid by the Municipal Corporation. The share of expenditure on wages and salaries in total expenditure of municipal corporation is quite significant. It varies between 20% to 57% of total expenditure. It should be noted here that the share of wages and salaries in total expenditure of municipal corporations is not only significant, but over a period of time, it has increased. This implies that the share of revenue expenditure in total expenditure has declined with the passage of time, which refers to the expenditure on various types of services provided by the municipal corporations. In the light of this, two separate exercises have been carried out with respect to the direction of causality between total expenditure and total receipt and total receipt and revenue expenditure.

Tables I, II and III summarise the results of the direction of Causality*. Table I represents the Granger's test of causality between revenue expenditure and total receipt for two different lag distributions. For the equations with revenue expenditure as the dependent variable, the null hypothesis is tested that the lagged values of total receipt do not improve the forecasts of revenue expenditure over the one obtained on the basis of the lagged values of revenue expenditure alone. For the equation with total receipt as the dependent variable, the null hypothesis is that the lagged values of revenue expenditure do not improve the forecasts of total receipt over the one obtained on the basis of the lagged values of total receipt alone.

Table I indicates bidirectional causality in the case of Gwalior (2, 2), Indore (2,2), Bombay (2,2 & 3,3), Nagpur (2,2), Poona (3,3), and Sholapur (3,3). Bidirectional causality suggests simultaneity between revenue expenditure and total receipts. That is, total receipt and revenue expenditure decisions are simultaneously determined. However, these results are consistent with two different patterns of lag distribution only in the case of Bombay. Only unidirectional causality from total receipt to total expenditure is observed in the case of Ahmedabad (3,3), Baroda (2,2 & 3,3), Dharwar (2,2 & 3,3), Ujjain (2,2), Lucknow (2,2 & 3,3) and Varanasi (2,2 & 3,3). These results imply that the hypothesis that the total receipts do cause revenue expenditure cannot be rejected.

In the case of Bangalore, with the change in the pattern of lag distribution, the direction of causality has changed i.e. unidirectional causality from total receipt to revenue expenditure is observed for the lag length (2,2), whereas

*These summary tables are based on the estimation of 320 regression equations. In order to economize space, the estimated regression equations are not provided here.

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unidirectional causality from revenue expenditure to total receipt is observed with lag length (3,3).

However, for municipal corporation, like, Surat, Jabalpur, Raipur, Allahabad and Delhi, no causality is indicated for two different lag patterns. This implies that revenue expenditure and total receipt are independent of one another. This indicates that increase or decrease in total receipt will exert no influence on revenue expenditure and vice-versa. We do not find the causality only from revenue expenditure to total receipts in any of the municipal corporations under the present study.

Table II represents the Granger's test of causality between total expenditure and total receipt for two different lag distributions. The direction of causality has changed with the selection of total expenditure as the variable in place of revenue expenditure, in the finances of Bangalore, Dharwar, Indore, Ujjain, Bombay, Nagpur, Poona, Lucknow and Varanasi. In rest of the finances of municipal corporations, the direction of causality had remained the same as in the case of revenue expenditure.

Here bidirectional causality is observed only in the case of Gwalior (2,2), Indore (3,3), Sholapur (3,3) and Varanasi (2,2). Only unidirectional causality from total receipt to total expenditure is observed for Ahmedabad (3,3), Baroda (2,2 & 3,3), Ujain (2,2 & 3,3), Bombay (2,2 & 3,3) and Nagpur (2,2 & 3,3). In the case of Bangalore, only unidirectional causality from total expenditure to total receipt is found. However, in the case of municipal corporations like Surat, Dharwar, Jabalpur, Raipur, Allahabad, Lucknow and Delhi, total expenditure and total receipt are independent from each other in two different types of lag distribution.

On the basis of Tables I and II it is said that in majority of the finances of municipal corporations, bidirectional causality and unidirectional causality from total receipt to total expenditure/revenue expenditure is observed.

Table III shows the direction of causality between revenue expenditure/total expenditure and total receipt for two different lag distributions through Sims' test. No causality is observed in either direction for any of the lag distributions. This shows that results indicating the direction of causality are not only sensitive to the pattern of lag distribution followed but also to the methodologies followed.

Concluding Remark

The results of our study indicate some similarities between expenditure-tax receipt relationship of local governments of U.S.A. as reported by Michael L. Marlow and Neela Manager[12]. Their studies show unidirectional causality that runs from tax receipt to expenditure for the shortest lag length (2,2). However for the remaining lag lengths, no causality is indicated. However, in the said study the direction of causality is examined on the basis of the aggregated data.

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TABLE 1
GRANGER'S TEST OF CAUSALITY BETWEEN REVENUE EXPENDITURE AND TOTAL RECEIPTS

Municipal Corporation	Lag Form	Degrees of Freedom	Revenue Expenditure on Total Receipts F Ratio	Total Receipts on Revenue Expenditure F Ratio
1. Ahmedabad	(2, 2)	(2, 13)	1.914237	1.388975
	(3, 3)	(3, 11)	5.25313*	1.07110
2. Surat	(2, 2)	(2, 12)	1.8662704	0.048647
	(3, 3)	(3, 11)	1.143620	1.2153
3. Baroda	(2, 2)	(2, 16)	6.1332412*	0.0374
	(3, 3)	(3, 15)	6.090589*	0.77966
4. Bangalore	(2, 2)	(2, 13)	4.2139057*	1.175761
	(3, 3)	(3, 11)	2.190322	10.087434**
5. Dharwar	(2, 2)	(2, 13)	8.530410**	0.28442
	(3, 3)	(3, 11)	4.401586**	0.46048
6. Gwalior	(2, 2)	(2, 13)	4.5903348*	3.990445*
	(3, 3)	(3, 11)	3.7027926*	1.97823
7. Indore	(2, 2)	(2, 14)	11.013581**	4.0347457*
	(3, 3)	(3, 12)	2.832827	4.2002694
8. Jabalpur	(2, 2)	(2, 12)	0.72602	0.95991
	(3, 3)	(3, 10)	0.98679	0.16788
9. Raipur	(2, 2)	(2, 11)	0.0070229	2.360
	(3, 3)	(3, 9)	0.32753	2.400129
10. Ujjain	(2, 2)	(2, 13)	18.632665**	1.0257396
	(3, 3)	(3, 11)	2.5520382	1.102345
11. Bombay	(2, 2)	(2, 13)	5.0487183*	8.7404527**
	(3, 3)	(3, 11)	10.620378**	5.664027*
12. Nagpur	(2, 2)	(2, 13)	20.292598**	3.9951617
	(3, 3)	(3, 11)	10.412022**	2.6720098
13. Poona	(2, 2)	(2, 13)	22.684183**	1.006573
	(3, 3)	(3, 11)	13.10856**	3.5897194*
14. Sholapur	(2, 2)	(2, 13)	5.0468721*	0.22127
	(3, 3)	(3, 11)	5.553649*	5.753475*
15. Allahabad	(2, 2)	(2, 14)	0.14186	1.250086
	(3, 3)	(3, 12)	1.085412	1.8950436
16. Lucknow	(2, 2)	(2, 14)	9.023658**	1.638508
	(3, 3)	(3, 12)	5.789699*	1.993954
16. Varansi	(2, 2)	(2, 14)	8.1451569**	2.8015273
	(3, 3)	(3, 12)	10.642957**	2.396893
18. Delhi	(2, 2)	(2, 13)	1.86614	2.6415092
	(3, 3)	(3, 11)	1.34441	1.609718

*Significant at 5% level
**Significant at 1% level

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TABLE 2
GRANGER'S TEST OF CAUSALITY BETWEEN TOTAL EXPENDITURE AND TOTAL RECEIPTS

Municipal Corporations	Lag Form	Degree of Freedom	Total Expenditure on Total Receipts F Ratio	Total Receipts on Total Expenditure F Ratio
1. Ahmedabad	(2, 2)	(2, 13)	1.58214	1.49903
	(3, 3)	(3, 11)	5.901719*	1.20594
2. Surat	(2, 2)	(2, 12)	0.99116	0.61551
	(3, 3)	(3, 11)	0.8285	2.32748
3. Baroda	(2, 2)	(2, 16)	9.60351**	1.60278
	(3, 3)	(3, 14)	4.865373*	2.78256
4. Bangalore	(2, 2)	(2, 13)	3.16474	1.66725
	(3, 3)	(3, 11)	1.83800	10.164447**
5. Dharwar	(2, 2)	(2, 13)	2.87486	0.90569
	(3, 3)	(3, 11)	1.23089	0.5515
6. Gwalior	(2, 2)	(2, 13)	4.58851*	3.99415*
	(3, 3)	(3, 11)	3.70213*	1.98037
7. Indore	(2, 2)	(2, 14)	10.88682**	3.39216
	(3, 3)	(3, 12)	7.2539**	4.49324*
8. Jabalpur	(2, 2)	(2, 12)	0.44876	1.05083
	(3, 3)	(3, 10)	0.61394	0.25775
9. Raipur	(2, 2)	(2, 11)	0.03391	3.47875
	(3, 3)	(3, 9)	0.44457	3.36796
10. Ujjain	(2, 2)	(2, 13)	4.30475*	1.44525
	(3, 3)	(3, 11)	23.916742**	2.30123
11. Bombay	(2, 2)	(2, 13)	5.82424*	2.49518
	(3, 3)	(3, 11)	8.05028**	1.95936
12. Nagpur	(2, 2)	(2, 13)	26.03976**	2.571091
	(3, 3)	(3, 11)	8.79529**	2.85006
13. Poona	(2, 2)	(2, 13)	2.32539	26.74753**
	(3, 3)	(3, 11)	11.58548**	2.07160
14. Sholapur	(2, 2)	(2, 13)	4.14179*	0.07442
	(3, 3)	(3, 11)	8.75772**	8.38916**
15. Allahabad	(2, 2)	(2, 14)	0.99226	2.567468
	(3, 3)	(3, 12)	0.70827	1.60398
16. Lucknow	(2, 2)	(2, 14)	0.078613	0.97114
	(3, 3)	(3, 12)	0.12546	2.71961
16. Varanasi	(2, 2)	(2, 14)	3.830712*	30.56948**
	(3, 3)	(3, 12)	2.32824	2.36473
18. Delhi	(2, 2)	(2, 13)	2.62249	1.34343
	(3, 3)	(3, 11)	2.30282	1.10902

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In other words, instead of examining the direction of causality separately for each local government, data are aggregated.

The present study takes into account total receipt which consists of tax receipts and grants from higher level government., because the share of both in total receipts fluctuates with respect to different municipal corporations.

Though the present study does not show consistent results with respect to all the municipal corporations to different patterns of lag distribution and to methodologies followed, in majority of the cases we find unidirectional causality from total receipt to revenue expenditure/total expenditure and in some cases bidirectional causality. The determination of bidirectional causality does not make us reject the hypothesis that higher spending levels result from higher revenue levels.

On the basis of the study, following policy implications are mentioned. The power of taxation should be delegated to the municipal corporations for raising funds from the people, for the maintenance of corporations and enable them to discharge their duties within their local limits.

Local bodies should make serious efforts to exploit non-tax sources to optimum level. Municipal Corporations should pay enough attention to construction of shopping centres, swimming pools, townhalls, guest-houses, parking areas etc.

Local bodies receive some grants from the government, but its share in total revenue is very negligible and grants are released in erratic manner. However, there should be a regular flow of income transfer from higher level of government to the local level of government. There is strong theoretical justification for it. Following Musgrave's[13] normative conception, it may be pointed out that "stabilization function" for welfare purposes falls almost wholly on the higher level of governments and it is the allocation function for the support of goods and services whose provision in adequate quantity and quality depends on government action that devolved on the lower level government. To the extent local government such as municipality is engaged in operating welfare functions, the funds for such activities should logically come from higher level of government.

Theoretical justification for higher government support has been clearly spelt out by Hirsch[14]. Fiscal difficulties of local governments are attributed to two basic causes. Sometimes local bodies are unable to augment their resources by raising tax rates because of political considerations. Also property tax which is the mainstay of local finance has a lower income elasticity that makes for difficulty in raising more funds through this tax only. The second important cause which creates local fiscal difficulties is that there are certain factors affecting local finance that are beyond the control of local bodies.

In the absence of an assured grant, the local authorities will be suffering under uncertainty which is against the basic requirements of efficient govern-

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mental services. The Taxation Inquiry Commission also maintained that these basic grants should be adequate for the normal requirement of local bodies.

Lastly, there should be a fresh review of functional obligations of municipal bodies and financial resources resting with them. They should be given more elastic sources of tax income.

TABLE 3
SIMS' TEST OF CAUSALITY; BARODA MUNICIPAL CORPORATION

	Lag Form	Degrees of Freedom	F Ratio
1. Revenue Expenditure on Total receipts	(2, 2)	(2, 10)	0.27419
2. Revenue Expenditure on Total receipts	(3, 3)	(3, 8)	0.42557
3. Total Receipt on Revenue Expenditure	(2, 2)	(2, 10)	0.39723
4. Total Receipt on Revenue Expenditure	(3, 3)	(3, 8)	1.60645
5. Total Expenditure on Total Receipt	(2, 2)	(2, 10)	0.14752
6. Total Expenditure on Total Receipt	(3, 3)	(3, 8)	0.57386
7. Total Receipt on Total Expenditure	(2, 2)	(2, 10)	0.00605
8. Total Receipt on Total Expenditure	(3, 3)	(3, 8)	0.23730

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GAINS AND LOSSES TO COUNTRIES FROM TRADE IN SERVICES

Paul Streeten

Generalizations, particularly in economics, are always dangerous. Empirical work usually destroys even the most imaginative, subtle and ingenious generalization. On the other hand, to say that each case is unique and that no general lessons can ever be learned from any specific event in space and time is to abandon thinking and analysis. The intermediate position is found in typologies and taxonomies. What might serve in analysing country-specific gains and losses from trade in services is a typology by type of country and type of service. It would be helpful for a policy maker to look at a matrix, showing on one side characteristics of countries, on the other characteristics of services, and then to say: since my country is relatively small, has an income per head of $x, is surrounded by the sea, and has a service sector absorbing x% of the labour force, my policy towards a service in which the user has to be near the provider, in which competition is strong, and which is closely linked to commodity production and trade, should be such and such. Writing this paper away from libraries and other forms of documentation, I shall have to rely on generalizations which may well be abandoned or qualified in a more detailed examination.

A naive approach to the subject would argue that countries that advocate free trade in services have, on balance, to gain, while countries that oppose it have, on balance, to lose. But this is not necessarily true. Countries frequently wrongly perceive and analyse their gains and losses from policies they advocate. This is particularly true of developing countries.

The principal advocate of free trade in services has been the USA.[1] What are her gains? Clearly, the advocacy has applied largely to certain kinds of services, above all banking and insurance, and not to others which would imply large-scale immigration of people from developing countries. Some services involve movement of the user to the provider (haircuts in India, or Niagara honeymoons cannot be exported); others movement of the provider to the user (construction of buildings or roads). Still others do not require movement by anybody: information is passed along a wire, television can be beamed from a satellite. It may not be

[1]This paper is greatly indebted to Jagdish Bhagwati's "International Trade in Services and its Relevance for Economic Development", 10th Annual Lecture of the Geneva Association, Pergamon Press, 1985, and to Deepak Nayyar's *International Trade in Services*, Exim Bank Annual Lecture, 1986.

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sensible to fly chartered planeloads of Americans to India to have their hair cut, but it is perfectly sensible to invite Indian construction companies, or consulting services, or doctors, or Mexican dentists to come to the United States and service consumers there. A truly general freeing of trade in services would give free access of nationals from developing countries to the users in the advanced countries. Such a step (as also the close link between some services and international capital flows) would mean encroaching on the time-honoured distinction between free trade in goods and permitted restrictions on the flow of factors of production. The distinction between factor mobility and trade becomes blurred.

A consistent policy of free trade in goods and services would remove all restrictions on migration of people who can provide services, at least on temporary immigration while the service is provided. At the moment the USA is advocating free trade in services which involve either locating Americans abroad or rendering services "along a wire", while not wishing to accept the services of Korean construction crews or Indian doctors.

There are three possible sets of gains for the USA. First, there is the gain from political support of powerful lobbies that should benefit from free trade, though these are not national gains. But politicians, according to one theory of the state, trade policies for votes, and if yielding to these pressure groups promises political support, this is a powerful motive for adopting them. The US multinational banks are such a pressure group and yielding to its demands constitutes the first type of gain to the US government, a political gain, though not necessarily a gain to the nation as a whole.

Ascending in the coverage of interests, there is a second set of reasons, which apply to the national interest of the USA. It can be argued that the US comparative advantage in services has increased, and that to exclude these leads to an unfair division of the gains from trade, But it must be noted that the services that are entering international trade are only a small part of the general expansion of the service sector in the US economy. It is true that some of these services are provided by government monopolies or by regulated private enterprises, so that comparative advantage is not always apparent or easy to determine, as it would be in competitive enterprises. But the fact that the USA has in general achieved substantial cost reductions in services connected with electronics and the transmission of information cannot be doubted. If, the US says, it keeps American markets open to foreign goods but foreign markets remain closed to American services, this leads to a biased international division of labour, in which the USA loses. It will, of course, be argued that other countries' trade restrictions do not affect the benefits to any given country from liberalizing its trade. Adam Smith compared other countries' restrictions to rocks in your harbour, which are no reason for throwing in additional rocks. But in the present atmosphere of "reciprocity", the bargaining power over closing markets to goods, even though it would hurt the protecting country, can be used to achieve liberalization in services in other, importing countries.

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At the third and highest level, free trade in services is thought to benefit the US, but not only the USA but the world community as a whole. Since Ricardo economists have advocated free trade as beneficial to all participants. But as we know from the theory of the second-best, partial free trade can be worse than severer trade restrictions. Trade diversion may be stronger than trade creation. Only the elimination of *all* barriers to trade can, on certain assumptions, be shown to be in everybody's interest. Quite apart from arguments derived from the theory of the second-best, America believes in a liberal world trading order. Under the postwar *Pax Americana* it has upheld the principle of liberal trade in institutions such as the GATT, the IMF and the World Bank, and has provided the public or collective good of this type of trade regime. With the decline of American hegemony, with slower economic growth and with the large and persistent deficit in the US balance of payments, commitment by the USA to a liberal trading order has declined. But the USA still believes in the rule of law in international trade and opposes discretionary controls. At this level, free trade in services is not only good for America, but good for all participants.

In advocating this stance the US does not stand alone. Other advanced, shall we say post-industiral or service countries, such as Great Britain and Switzerland, have joined the US call. Even some developing countries, such as Hong Kong and Singapore, which stand to gain from offshore banking operations, consent. At one time it was thought—mainly by the late Nicholas Kaldor—that productivity growth in services is slower than in manufacturing, and a growth strategy suggested discriminating against them. But this view is no longer popular and countries like Britain and Switzerland have made common cause with the USA.

Why do the developing countries, led by India and Brazil, but also Argentina, Nigeria, Cuba, Egypt, Nicaragua, Peru, Tanzania and Yugoslavia, fear that they would lose from liberalized trade in services? There are six arguments explaining the fear. The first argument is the reverse of the second argument of the US. If comparative advantage in services has shifted to the post-industrial, advanced countries, to the services economies, it is feared that the developing countries would lose, either relatively or absolutely. This assumes, of course, that productivity improvements are not passed on in lower import prices or, if they are, that this prevents the growth of infont service industries in the developing countries.

A second fear is that negotiating about services will divert attention from keeping trade in goods open (or liberalizing it where it is now restricted), and thereby harm the developing countries in an area in which their comparative advantage is greatest. A particular form of this fear is the anticipation that concessions on services will be traded for relaxations of violations of the GATT spirit in such areas as the Multifibre Arrangement.

The third fear derives from various extensions of the infant industry argument. Although the developed countries have now a comparative advantage in services, the developing countries may acquire it in the future. Jonathan D. Aronson (in a paper for the Overseas Development Council) illustrates success stories of service

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industries in developing countries. Avianca, Colombia's national airline, is the second oldest in the world (after KLM). Banco do Brasil was for many years among the most profitable banks in the world. Reuters is now owned by Mexico. India's software industry is highly respected. Singapore Telecom is an innovative leader and Palapa, Indonesia's satellite communication system, is extremely modern. Korean and Taiwanese construction firms are world leaders. And the Philippines are becoming a force in animation of cartoons, architectural design and drafting.

Comparative advantage in services depends upon (a) the existence of certain types of infrastructure, subject to decreasing costs, (b) certain skills and aptitudes which can be learned by doing and the initial learning phase can represent large fixed costs, (c) certain attitudes which may call for a cultural transformation. Moreover, services often require lumpy investments, with long gestation periods, and yield externalities and economies of scale. The initial comparative disadvantage is not God-given, but can be reduced and eliminated, but this process takes time. Meanwhile, protection is justified.

This line of argument is reinforced if it is remembered that the developed countries protected heavily the same service industries in which they have now gained superiority. Even the most unsordid act in history, Marshall Aid, was combined with such protectionist measures. Half of US food and equipment to Europe had to be carried in American bottoms, to the chagrin of maritime powers like Norway.

The infant industry argument as such is not, of course, a first-best argument for protection. If future gains compensate for current losses, including an appropriate interest rate, it constitutes a case for borrowing, possibly from the government if private markets are imperfect. But if the future benefits accrue to others than the investing firm, so that there are externalities, either a subsidy, or, if there are fiscal constraints, protection, is indicated. Under this heading one might also include restrictions intended to offset restrictive business practices by the foreign service provider. But this applies just as much to trade in goods as in services.

A fourth argument relates to the division of gains from trade. Transnational corporations are heavily engaged in trade in services: the large multinational banks, insurance companies and other financial institutions[2]. It is well known that intra-firm trade is not guided by the same considerations as arm's length trade, and the transfer pricing practised by multinationals can give rise to too small a share of the profits accruing to developing countries.

A fifth argument relates to the balance of payments. The developing countries now have a large and growing negative balance on service trade and they may fear that freeing this trade would put an additional burden on their balances of payments.

[2]Frederick F. Clairmonte and John H. Cavanagh, "Transnational Corporations and Services: the Final Frontier", in *Trade and Development* and UNCTAD No. 5, 1984, United Nations.

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A sixth set of arguments relates to political, strategic or cultural factors. Some services, such as tourism or advertising, can be excessively intrusive, encourage the wrong attitudes in the local population, and disturb indigenous culture. Others may be closely linked to areas of national sensitivity, such as media, and be ruled out for foreigners. Others again may be regarded as part of the infrastructure and affect national security, such as telecommunications, shipping or banking. It is important, though not easy, to distinguish between barriers to trade and methods to preserve national cultures, security and autonomy. But even on narrowly economic grounds there is reason for caution. Some services, such as financial services, give rise to movement of capital (and others, as we have seen, to movement of people). If a country wishes to maintain control of its capital outflow, free trade in financial services makes this more difficult. Past theory and practice have drawn a sharp distinction between the flow of goods and of factors of production.

There are two possible types of gains to the developing countries from freer trade in services. First, they may benefit from cheaper and more efficient imports of services provided by the richer countries. Cheaper banking and insurance services may help the production and export of developing countries, just as a cheaper import of steel reduce the costs of producing goods using steel. Secondly, they themselves may have a comparative advantage in certain services.

The first type of argument does not weigh heavily with mercantilistic minded politicians, who see import as a loss and export as a gain. It can also be countered with the infant service argument, although there may be better methods than protection to encourage an infant service.

The advanced countries both dominate the trade in services, and have a large export surplus in services. Deepak Nayyar argues that this implies that they have a substantial interest in the liberalization of international trade in services[3]. As we have seen, it is true that their preponderance and their large export surplus suggest that they have comparative advantage in service, and can benefit by selling even more when trade is liberalised. But there are arguments on the other side. The elasticity of demand for the services of a small newcomer is much higher than that for large established firms. If a developing country can establish a cost advantage in a market now occupied by large firms, its prospects are good. This applies to volume of sales. As to the terms of trade, again developing countries can benefit from the expansion of export of services by advanced countries. If economies of scale prevail, or if prices have to be reduced for larger scales, the terms of trade of the developing countries will tend to improve.

The second argument has both economic and political appeal. Some developing countries such as South Korea have shown great competitiveness in construction. And there are others. Developing countries have acquired comparative advantage in communication software, punching data onto cards, conveying

[3]Deepak Nayyar, "International Trade in Services: Implications for Developing Countries", Exim Bank Commencement Day Annual Lecture: 1986.

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information of all sorts across a wire, in tourism, shipping, etc. In order to reap these advantages, it is important to insist in the negotiations that not only services in which the advanced countries have superiority, but also those in which the developing countries superior should be included. Domestic service by Central American maids, medical services by Indian doctors, and construction services by Korean crews would have to be freed, as well as American banking and insurance.

I want to end with two considerations that would justify some hesitation by developing countries to accept free trade in services. They have nothing to do with infant industry arguments, balance of payment losses, restrictive business practices, national sovereignty, cultural autonomy, externalities, infra-structure or "commanding heights", but I have not come across them in the literature.

The first consideration springs from a specific characteristic of services. Services are not storable. There are exceptions—software messages stored on a recording machine—but, by and large, they cannot be stored. They have to be consumed at the same time as they are being produced. They have been defined as those fruits of economic activity that you cannot drop on your toe. This gives added power to the provider of the service, if there are no adequate alternatives, and if the service is important. Electricity workers and railway workers have greater bargaining power than coal miners, because coal can be stocked and used while miners are on strike, whereas electricity and transport cannot. The bargaining power of the providers of services is greater than that of the producer of storable goods. Whether this is important in international trade, say in the case of trade embargoes or sanctions, remains to be seen. If a country became dependent on another country's essential service, say of shipping, this could lead to greater dependence than, say, imports of grain. In this sense, the growing international trade services would reinforce a tendency already at work in the international economy, viz. growing inter-*dependence*. By this is meant not only the growth of benefits from international relations, but also the growth of possible damage, should these relations be disrupted. A strategy that is risk-averse might forego some of the benefits of exchange and provide the service domestically at higher costs for the sake of avoiding the risk of damage, should trade be terminated. This constitutes an argument against free trade in services not usually presented.

The second consideration is concerned with equality. The international division of gains from free trade in services may be unequal, and, moreever, may make national policies for greater equality or an incomes policy more difficult. Consider a model in which two types of services have to be combined, one of which is highly skilled, the other unskilled. Let us take air transport. The providers of the skilled service, pilots, are in relatively scarce total supply, but highly mobile between countries in response to financial incentives. On a clear day, an airline pilot can see the world. The unskilled factor, ground personnel, is in highly elastic local supply, but immobile between countries. The result will be that pilots will earn large rents while ground personnel will get the bare minimum wage. Any country, even a very poor country, wishing to have an airline will have to pay its

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pilots the high international salaries or it will lose them. A policy to make incomes more equal domestically will be impossible. Both international and domestic inequalities will tend to increase. Other examples are transnational advertising, hotel chains, tourist enclaves, etc. The cause of the problem is differential elasticities of supply of types of services that have to be combined. These can cause more serous problems to developing countries than the direct effect of the brain drain, of the loss to foreign countries of trained professional manpower.

Cost and Benefits within Countries

More important than the impact of free trade in services on different countries—the subject set to me for this paper—is its impact on individuals, families and groups of people within countries. It would be possible, for example, for service trade liberalisation to benefit rich countries, but mainly rich people within these countries, and to harm poor countries, while benefiting poor people within these countries. In the bad old days when it was assumed that government can do no wrong, a benefit to a country was readily converted into benefit to serving people through taxes, subsidies and social services. But according to current views, governments can do no right, and it is therefore important to trace costs and benefits to specific groups. I do not know of any work along these lines. Since much of the service trade is conducted by large transnational corporations, it may be presumed that a large share of the benefits would accrue at least in the first round, to the capital and management of these corporations. If informal sector enterprises were included in the liberalised trade, some sections of the poor would benefit. An analysis could be conducted in terms of the relative labour and capital use of traded services versus non-traded goods and services. If the traded services were more labour-intensive than non-traded goods and services, liberalisation would raise not only wages in these services, but in all sectors, and would benefit the wage earning groups. If the opposite is true, the reverse conclusions would follow.

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DO WE NEED A NEW "BRETTON WOODS"?

Prof. Morris Miller
University of Ottawa

"... at Bretton Woods ... the participants were determined to design an international economic system where beggar-thy-neighbor" policies ... did not recur." —*World Development Report, 1985*

"The spirit that produced Bretton Woods reflected the realization that in the long run the national welfare can only be safeguarded within the framework of the general welfare ... In (today's) circumstances the international economic system operates—if at all—as crisis management. The risk is, of course, that some day crisis management may be inadequate. The world will then face a disaster its lack of foresight has made inevitable ... My major point is that the world needs new arrangements." —*Henry A. Kissinger*[1]

(A) The Conceptual Rationale for a "New Bretton Woods"

As the global economy continues to lurch from one crisis to another there are many voices calling for a "new Bretton Woods". No sooner did the fears of a global energy crisis subside, then the spotlight turned to debt; the debt crisis continues to fester, but the attention span being short, the focus then turns to the next international crises, the environmental one. These crisis are interrelated and none are, as yet, "solved"—or even eased by any significant measure.

The world, it seems, has learnt to live with "crises". This is a strange turn of events when the nature of crisis is its unsustainability, crisis being defined by the dictionary as a state of affairs that cannot continue and which, therefore, portends significant or radical change. Either we have depreciated the term by a too-casual usage, or the portended radical change is still in the offing. The quick succession of crises from energy to debt to environment suggests that these are rumblings, foretelling a really massive crisis to which all these smaller ones may contribute. When the breakdown occurs it would, of course, be too late. Out of the ashes there would emerge a series of bold initiatives, reflecting a much greater receptivity to the idea that the old global economic structure with its institutional trappings is in need of change, that the game of trade and capital flows will have to be played

[1] "International Trade: It's Time to Change the Rules of the Game", *Washington Post*, Nov. 22, 1984.

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by new rules. Meantime, the global economy goes its fragile way, carrying the burden of massive trade imbalances, growing debt, continuing build-up of environmentally-damaging carbon emission, etc.

The present approach of muddling-through is buying a little time at a very high price in human suffering. Far from easing the festering conditions that give rise to massive poverty on an ever increasing global scale, the prevailing policies are exacerbating the polarization of incomes both between and within nations and, at the same time, providing no lessening of instability and fragility. The pressure for corrective action is mounting from all sides: the banking community is growing more and more resentful of the extreme pressure to "get in deeper" while, at the same time, the debtor countries are sinking deeper into debt, suffering from increasing social and political tensions, and from a condition that has been aptly called "debt trap peonage" or a palpable erosion of their national sovereignty.

This, then, is the setting for the calls to establish a "new Bretton Woods". It is reminiscent of the precedent set by the example of John Maynard Keynes and Harry Dexter White who, in 1941 after Stalingrad and El Alamein when there was a glimmer of light at the end of a long dark tunnel, began the incubation of the proposals for global cooperative arrangements that culminated in 1944 at Bretton Woods in New Hampshire. The underlying premise of those who call for the new Bretton Woods can be summed up fairly accurately in a phrase: if there had been an appropriate system in place during the 1970s, it would not have been possible to pile up the troubling mountain of debt because the global financial system would have had an adequate control mechanism in place. Under a properly functioning global economic and financial system, the countries on a borrowing and lending binge—it takes two to tango—would have been brought up short by the Bretton Woods reins.

The United States found out about this constraint when, in the mid-1960s, it pursued domestic policies mainly in connection with the pursuit of the Vietnam War that brought on inflation at a rate exceeding that of the other major industrialized nations. Pressure was exerted on the dollar and a gold rush was set in motion reflecting waning confidence in the dollar. U.S. policy makers had to choose between reining in the inflationary forces by tough fiscal and monetary policy measures, thus adhering to the obligations the country had assumed under the Bretton Woods agreement, or breaking out of the agreement. The United States selected the latter course and thereby permitted—if not abetted—the process leading to the present debt crisis, which is, at bottom, a crisis of the global financial system.

The contention is that the demise of the Bretton Woods system in the late 1960s and early 1970s enabled the creation of a debtor's paradise in which inflationary expectations (with concomitant negative interest rates and devaluation of the U.S dollar) induced excessive borrowing. On the lending side, the conditions were extraordinarily attractive since there were plentiful petrodollars to recycle and control was virtually nonexistent with the weakening of the Bretton Woods system and of one of its institutions, the IMF. This condition enabled—perhaps made necessary—both the rise of the Eurodollar market

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phenomenon and the concomitant spectacular increase of commercial bank lending in the international arena as the main conduits for handling the challenge of petrodollar recycling.

The rationale for the calls for monetry reform is, therefore, rooted in the failures or weaknesses of the prevalling system that have evolved after the abandonment of the Bretton Woods system. These failings or weaknesses could be listed as follows:

- The absence of policy coordination that followed with the weakening of U.S. leadership. A very powerful economy can impose coordination; when that economic might is overwhelming, every country has no option but to follow. The follow-the-leader regime is sustainable if the players find the outcome is either tolerable and/or the costs (and risks) of opting out are intolerably high.
- The absence of a sufficiently early warning system and an adequate response mechanism. "Adequate" is a relative concept; what was acceptable yesterday may be wholly unacceptable today when:

  (i) Changes in speed and direction of exchange rates and capital transfers are much too rapid and massive to be handled in the conventional manner through negotiated aid agreements and traditional investment channels.

  (ii) When current account balances move with a speed, amplitude and volatility that puts corrective steps beyond the response capability of any government or multilateral institution.
- The absence of any form of control (braking and/or steering) mechanism on the mobility of capital. The ability to control is inversely correlated to the speed and mass of the object to be controlled. It is, thus, an increasingly more difficult and dangerous situation:

  (i) When the Eurodollar market and other foreign exchange transactions have doubled between 1979 and 1984 to attain a global volume of $ 450 billion per day or $ 100 trillion per year.

  (ii) When cross-border investment and trade in goods have increased by about 20 per cent a year to attain a volume of almost $ 2 trillion.

There are important implications not only in the sheer magnitude of the absolute amounts involved but also in their dynamic and particularly in the shift of their relative volumes. While the destabilizing potential of these changes is very worrisome—and we already have a foretaste of the enormous potential for such damage in the current debt crisis—the worry is compounded by the fact that control by any one nation or small number of nations (such as the G-3) is becoming much more difficult with each passing business day. There is, of course, the further worry as to whether such control would be exercised in the interests of the global community of nations.

Bretton Woods seems to have been an appopriate enough response to the challenging problem faced by the world community at that time. At least there

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appears to have been some mutually supportive relationship between the global economic and financial system that was in place and the increase of international trade of about 250 per cent and of GNP of about 150 per cent over the two decades when it was operative. There were, of course, other factors that might have played a causal role, so the historical correlation is put forward without claiming more for the Bretton Woods agreement than can be rigorously supported, but even that measure of a claim to success is impressive. This being so, when the question is asked: what should be the appropriate response at this time?, the answer comes readily to mind.

(B) Distinguishing between the Substantive and the Procedural

It has long been recognized that if the concept of coordination and its counterpart, constraint, are to be more than pious hopes, leadership is needed to provide the international "public good" that is so desperately needed by the global community.[2] This would call for a significant change in the behaviour of the leaders of the major industrialized nations which, by virtue of their financial and other resources, are the only ones that could provide such leadership. Professor Charles Kindleberger described the current situation succinctly:

> "After about 1981, the United States, like Britain from about 1890, has shrunk in economic might relative to the rest of the world as a whole, and, more importantly, has lost the appetite for providing international economic public goods—open markets in times of glut, supplies in times of acute shortages, steady flows of capital to developing countries, international money, coordination of macro-economic policy and last-resort lending."

Formal coordinating meetings between countries to discuss economic and financial issues have been going on all the time on a regular basis within the framework of the IMF, the World Bank, the GATT and the United Nations and its other agencies and on an *ad hoc* basis through global and regional conferences such as those on environment, new sources of energy, food, and so on. In addition there are the OECD meetings on aid, trade, and a range of economic and financial issues; and there are the most publicized of all such conclaves, the so-called summit meetings. But these have had—and undoubtedly will continue to

[2] "Public goods" or "collective goods" are defined as "that class of goods or services like public works where exclusion of consumers may be impossible, but in any event, consumption of the good by one consuming unit does not exhaust its availability for others" Prof. C.P. Kindleberger, "International Public Goods without International Government", *American Economic Review*, March, 1985.
He ponits out that such goods and services are typically underproduced since its voluntary provision "is plagued by the free rider". In the international sphere the primary public goods and services are "the restoration of the maintenance of peace, an open trading system, well-defined property rights, standards of weights and measures that may include international money, or fixed exchange rates, and the like."

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have—negligible effect so long as the major players on the economic and financial stage pursue highly divergent policies.

The first sign of change in this regard was evidenced in September 1985 when U.S. Treasury Secretary Baker requested a meeting of the finance ministers of the five leading industrialized nations, the G-5, in New York at the Plaza Hotel. This step heralded a change in U.S. policy from indifference to concern about the global economic state of health. The Plaza meeting was followed by other meetings, each followed by a weakly coordinated series of actions designed to impact on interest rates and exchange rates. As it has become ritualized by repetition, this procedural development has been welcomed by some as the first, hesitant steps to the new Bretton Woods despite the fact that this ad hoc process still lacks an explicitly declared dedication to problem-solving of the broader debt-related global issues such as environmental degradation—and still lacks breadth of participation by virtue of its exclusivity. But it is a beginning, a portend of the institutional arrangements that global interdependence necessitates. The structural or systemic changes that have already occurred as a consequence of or a reflection of the debt, energy and environmental crises have called forth commensurate ways of coping with the consequences of such changes.

The world has long lived with indecision, inefficiency, and inequity. Few of the advocates of a new Bretton Woods would be moved to urge changes on that account, but they make common cause in feeling that—as a matter of pragmatism, not morality—the present arrangements are unsustainable. The key question then becomes: will policy and institutional changes be made by volitional decisions in a controlled and orderly way to take advantage of the greater integration of the global economies or will policies and institutional arrangements be changed by *force majeure*, that is, in an uncontrolled and precipitous manner?

Should the changes come about in the second manner, the solution or outcome is likely to be a retreat from the 40-year-old trend toward interdependence to autarkic policies as each of the industrialized countries endeavors to minimize the damage to itself by adopting "beggar-thy-neighbor" policies. This set of options reveals the element of urgency and of the stakes involved in finding a way out other than through breakdown, out of the ashes of which will emerge a new order of things.

If the concept of Bretton Woods is to provide a way out, it would have to contain the following two components.

- First, scope that is wide enough to include consideration of a broad range of policies and changes in the existing institutional arrangements to achive a greater measure of coordination and cooperation in the economic and financial sphere, which is generally recognized to be an essential condition for contending with the formidable present and looming problems of the global economy.
- Second, modalities that are flexible enough to enable meaningful agreements to be reached for *assuring* coordination and cooperation.

One of the options to consider would be the preparations for and the convening

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of a conference along the lines of the Bretton Woods Conference of 1944. However, though the concept of Bretton Woods is indelibly associated with that historical event, there are other organizational or procedural options that might embody the spirit of that occasion without the literal emulation of a staged conclave at a secluded resort with an all-star cast and an all-encompassing ambitious agenda. The accent should be less on the process and more on the substance.

(C) The Chorus Calling

The list of advocates for consideration of a Bretton Woods approach is long and, in terms of the political spectrum, wide. That list includes eminent persons from both developed and developing countries and from the two solitudes, the business/financial world and the academic.[3] The Democratic majority of the U.S. Congress' Joint Economic Committee, in its 1986 annual report issued, urged "speedy action on a new conference patterned after the Bretton Woods meeting of 1944". From Japan, as early as 1985, there was a report of a ministerial consultative committee set up by Prime Minister Nakasone proposing "a call for a 'new Bretton Woods' to reform the international monetary system and to aim for the creation of a world fund to harmonize the interventions of central banks on exchange markets". From Europe, the French have sent the same basic message: during a state visit to Brazil in mid-October 1985, French President Francois Mitterand observed that "there is no durable solution to the foreign debt problem without . . . reforms in the international monetary system". This statement reaffirmed his comment on the same subject two years before when he called for "a carefully organized international monetary conference at the highest level (to establish) common rules of the game and clear perspectives without which we will not emerge from the (present debt crisis) situation".

To this vocal political support for reform of the international monetary system, there should be added the voices of private individuals from the investment financial community, such as Felix Rohatyn ("a successor conference to the Bretton Woods agreement should study a more orderly international monetary system") and from the G-24 group of Third World ministers:

> "the convening of an international monetary conference . . . (is) an important and essential step . . . in moving towards a thoroughgoing reform of the international monetary system which would secure the objective of exchange and monetary stability on the one hand, and address itself to the special concerns of the developing countries on the other."

There are some advocates who focus on the process as, for example, a former

[3]See, for example, from academia, Professor Gerald Helleiner, "An Agenda for a New Bretton Woods", *Foreign Policy Journal,* Winter 1984. From the "third world", Justinian Rweyemanu, "Restructuring the International Monetary System", *Development Dialogue,* 1980:2.

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New Zealand prime minister, Sir Robert Muldoon, who sponsored the resolution to have the Commonwealth Secretariat prepare a study focusing on the desirability and feasibility of a new Bretton Woods:

> "(We must commit ourselves to) start a systematic process which looks to significant changes in the structure of trade, payments, development efforts and exchange rates . . . Basic preparatory work would be undertaken first by a small group of 20 to 25 experts—who have the political backing of their governments—with the IMF, GATT and maybe UNCTAD sitting in. To have real influence requires a body of the highest political profile which is what's lacking now at the IMF . . . A second Bretton Woods conference (would) come out at the end of this process rather than at the beginning."[4] (Emphasis added)

There would seem to be general agreement that something more must be done and that defining what constitutes "more" calls for considering a process to lead to significant changes in the way we do things. There is, however, a great divergence with regard to procedural specifics except for the general point that the concept of Bretton Woods serves as a shorthand way of referring to the formalization of the process of coordination that would both guide and constrain the conduct of economic and financial affairs among nations. However, this does not imply one big meeting along the lines of the 1944 affair. That meeting was historic and probably will never be replicated in terms of what was accomplished in so short a time. To attempt to do so would probably be counterproductive since the conditions that made the Bretton Woods meeting possible were unique. In any case, the procedural aspect is secondary; what is important is finding a way to encourage international policy coordination. The focal issue at that level of governance has gone beyond policies affecting trade and capital flows to ease the debt crisis and promote global growth; it now must include the related factors of energy and the environment by shifting the global energy mix away from the present degree of dependence on carbon-emitting fossil fuels and by lightening the debt burden , with its short-term pressures that increase fuelwood dependency and other practices that are environmentally damaging.

(C) The Case against a "New Bretton Woods" Approach

It is very fashionable in some quarters to dismiss advocacy for a Bretton Woods approach to the current global cirisis as premature, naive, unrealistic, and, above all, unnecessary and possibly harmful. The argument has several strands, the main one being that nothing is likely to be achieved by this process except the

[4]Quoted in "Muldoon Outlines Priorities of a Second Bretton Woods: Wants Global Monetary Structure Revamped", *Washington Post,* February 26, 1984. His recommendations include establishment of an "economic security council" whose findings and decisions would not bind sovereign states but would hopefully influence them.

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raising of expectations that are likely to be dashed when the spotlights are turned off and bland communiques are all that is left to show for the circus.

Perhaps the most articulate concise statement of the skeptics' position is the one presented by Edward Bernstein, who, as assistant director of monetary research at the U.S. Treasury in 1944, participated at Bretton Woods as a member of the U.S. delegation. In a retrospective article, he addressed the question head-on: "Do we need a new Bretton Woods?"[5] He concludes quite categorically: "There is no need for a conference to deal with international monetary problems." Leaving aside the reference to a conference as a nonrelevant issue, we can focus on the substantive argements put forward.

Three main reasons are generally advanced in opposition to the concept of a new Bretton Woods, and Edward Bernstein presents two of them. Each should be considered.

- First, the IMF is already available and is both mandated and adequate for bringing countries together for meaningly, wellfocused discussion, and follow-through action:

> "Because the Bretton Woods Agreement established the Fund as a permanent institution for consultation and collaboration on international monetary problems, there are no problems that could come before an international conference that the Fund is not already empowered to deal with. As a practical matter, the Annual Meeting of the Board of Governors of the Fund is in every respect an international monetary conference . . . An international monetary conference, called to consider a wide range of questions, some of which would be irrelevant and on none of which is there a consensus, would inevitably cause confusion and interfere with the orderly evolution of the international monetary system."

- Second, the disruptions in the world economy have to be dealt with intially through national policies, particularly, "by the U.S. putting an end to their inflation through appropriate fiscal and monetary policies which would lead to a decline in interest rates, to higher rates of growth of output and of world trade and to remunerative prices for basic commodities".
- Third, there is not now—or is there likely to be in the foreseeable future—a willingness or capability on the part of the U.S. administration and/or any powerful and/or influential congressional bloc to enter into any such agreement because it would constrain their sovereignty.

Each of these points merits attention before one can turn to the agenda items of the new Bretton Woods and consider what might be done to forge our future, rather than standing by in a responsive mood waiting for our future to happen.

[5]"Do We Need a New Bretton Woods?", *Finance and Development,* World Bank/IMF, Washington, D.C., September 1984.

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(D) Is the IMF the Appropriate Instrument?

The fact that the IMF has the mandate and could, in theory, do the job is not being questioned. The strongest advocates for a new Bretton Woods, the deputies of the Group of 24, are in agreement on that point. In the final draft of their presentation prepared for the Interim Committee meeting scheduled for early October at the time of the annual IMF/World Bank meeting in Seoul in 1985, they concede that "a framework for policy coordination exists under the IMF Articles".

However, two groups, the G-10 and G-24 and the forums for the verbal jousting, the Interim and the Development Committees, provide scarcely any opportunity for interaction and discussion, meaningful or otherwise.[6] In the Interim Committe, the amendments to the IMF's structure, programs and resources that have been introduced have not been hammered out through a give-and-take discussion in the committee meeting. Anyone attending these meetings and familiar with the ways and mores of this institutional arrangement is bound to be impressed by the formalism and dismayed by the limitation of the ritualistic procedures. But that is, of course, the way those who favor the *status quo* would have it. So the ritual goes on from year to year.

One has only to look closely at the nature of the reforms already incorporated as amendments to the IMF's Articles of Agreement to see the recommendations, which were later incorporated as amendments, are hardly more than accommodations made *ex post*. The reform on exchange arrangements incorporated in the Second Amendment of the Articles of Agreement provides a case in point.[7] The record of performance of the IMF in the discharge of this surveillance responsibility has prompted the G-24, in its report prepared for presentation at the Interim Committee meeting in October, to deplore the IMF's "asymmetrical, biased, and imbalanced" application of this function. The complaint is that the surveillance "has so far been largely ineffective on major industrial countries (but has) fallen disproportionately on developing countries."

[6]The Interim Committee was once known as the Committee of 20. Its official name is Committee of the Board of Governors on Reform of the International Monetary System and Related Issues. It normally meets twice a year. The Development Committee's formal name is the Joint Ministerial Committee of the Board of Governors of the Bank and the Fund on the Transfer of Real Resources to Developing Countries. Its mandate and mode of operation makes it hardly more than a sounding board which, while useful for raising issues, severely limits its impact.

[7]It suffices to quote one excerpt from a commentary by Joseph Gold, former general counsel and director of the Fund's Legal Department, with regard to this example. This amendment became effective in April 1978, almost five years after the de facto end of the par value system set up under the Bretton Woods Agreement. The Interim Committee approved an amendment that "represents a complete departure from the central feature of the original Articles, the par value system . . . The emphasis in these provisions shifts from stable exchange rates to the orderly economic and financial conditions that will promote a stable system." (Emphasis added). Joseph Gold, "Some First Effects of the Second Amendment", *Finance and Development,* World Bank/IMF, Washington, D.C., September 1978.

The IMF was henceforth to be relied on to ensure the effective operation of the international monetary system operating under the newly formalized rules.

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If is difficult to assess the damage this imbalance does to the IMF's reputation as a neutral agent in helping manage global monetary conditions and, within that framework, the debt crisis. The weakening of this role of "impresario" has diminished the potential contribution the IMF can make to the resolution of the debt crisis. This adverse effect is compounded by the critical views surfacing with regard to its role in relation to those developing countries facing formidable debt problems. The emerging image is reflected in such comment as those of Don McGillivray, a columnist of the staid *Financial Times (Toronto)*, who observed that "the IMF, in its attempts to clamp austerity on nations, is the present day equivalent of debtor's prison", and of Peter Montagnon, Euromarkets correspondent of the *Financial Times (U.K.)*, who noted that there are "increasing doubts over the IMF's actual competence and its ability to prescribe the right medicine".

There seems to have been a serious weakening of the IMF management's position regarding its largest shareholder, the United States. This has eroded the IMF's reputation as honest broker, which underlies its surveillance function, and of its good offices in playing a mediating role between the policy positions of the ministers of the G-24 and the G-10. The submissive posture of the IMF regarding the United States is well illustrated by the record of the IMF's role in the run-up to the debts crisis when the institution's ability to meet the global liquidity requirements were severely constrained. This was largely because of U.S. resistance to the idea of empowering the IMF to enable it to play a more active role. The First Amendment, which enabled creation of Special Drawing Rights (SDRs), was agreed upon only after great delays occasioned by U.S. opposition.[8] SDRs were finally approved when the global financial situation had become very strained and, when finally issued, were grossly inadequate, so much so that the global liquidity requirements had to be met by default through the growing Eurocurrency market, with all that type of structural change in the world's financial markets implied.

The IMF has a very important role to play in helping ease the debt crisis and in implementing the measures necessary for the attainment of global conditions that are conducive to growth compatible with greater equity and environmental quality. But as a practical matter, the IMF as it exists today is seen to be too partisan. Thus, it is hardly surprising that there is a search for other avenues on how to achieve the necessary policy cooperation and coordination in the sphere of trade and finance, wich are essential conditions for the longer-term resolution of the present crisis.

(E) Can We Expect National Policies—Particularly that of the United States—to be Devised with Due Regard to Broader Global Responsibilities?

The IMF Articles of Agreement, in Article IV, obliges each country to have

[8]For elaboration, see "The Institutional Evolution of the IMF, *Finance and Development*, Sept. 1984.

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"due regard for the circumstances of each member." It is relevant to ask about the probability of this happening, particularly with respect to the United States and Japan and other industrialized nations. The Bernstein thesis (and the rationale for the recent amendments to the IMF Articles of Agreement) is that in a world of flexible exchange rates there would be stability and balanced international accounts over the long run if (i) the underlying factors influencing these rates and balances were themselves stable, and (ii) the volume and direction of the flow of resources through trade and capital movements were to adhere to the logic of the debt cycle hypothesis. In order to attain those desired conditions the major trading countries must discharge certain obligations with regard to the formulation of their national policies that have to do with being sensitive to the impact of their policies on other countries.

This applies with special relevance to the United States, not because it is the most delinquent in this regard, but simply because, as Dr. Bernstein implies, the most powerful economy and reserve currency country has to lead the way for these two conditions to be met. Yet, as the history of the post-war decades reveals, the United States in the past four decades has rarely played the role expected of it within the framework of the Bretton Woods agreement when circumstances forced a choice between short-term parochial interests and longer-term global interests. The United States abandoned the obligations whenever it became the hard way to go, whenever immediate politically unappealing measures with respect to monetary and fiscal policy were called for to maintain the value of the dollar and provide other international public goods that would help assure global growth.

There was even little regard for both the logic and civility of cooperation and coordination. Some of the most drastic policy decisions, which impacted most severely on other countries were taken without consultation or even warning. Commentators, as far apart in the vantage from which they have viewed the world scene as Drs. Raul Prebisch and Henry Kissinger, speak with one voice on this issue:

> Dr. Prebisch:
> "The use of the dollar as an international as well as a national currency has given the United States the privilege of creating international money and obtaining free of charge part of the product of the rest of the world in exchange for this money. At the same time, it has imparted to the United States the responsibility of following principles inspired by the needs of the world economy. Full use has been made of the privilege, but the way in which the responsibility has been carried out can hardly be the subject of admiration."[9]

[9] *International Monetary Indiscipline and the Debt Problem,* p. 173.

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Dr. Kissinger:
"We live with the paradox of a global economy which lacks a system for setting agreed long-range goals, . . . (a system characterized by) incongruity between the internationalization of the world economy and the dogged strengthening of national autonomy in economic decision-making . . . A case in point (is) the unilateral decision by the United States in 1971 to suspend the convertibility of the dollar and to impose a 10 per cent surcharge, the effect (of which) was to overthrow the Bretton Woods arrangement affecting all countries—without prior consultation or notice to anyone."[10]

With these questions about discordance becoming rampant, with the capacity for leadership of the dominant economic and financial nations significantly weakened, and with severe strains in the prevailing system breaking out in the form of the debt, energy and environmental crises, it is to be expected that a new institutional framework would have to adapt either gradually or dramatically. National policies of economies as dominant as that of the United States need to be devised on the basis of the perception of its global responsibilities and not merely on the basis of its narrow national interests or there will be a heavy price to pay for both the United States and the whole global community.

The experience of the breakdown of the Bretton Woods agreement illustrated this point dramatically. The historical record indicates what happens, when, in this highly integrated economic and financial global village, the United States tries to go it alone. One episode from the recent past can dramatically illustrate this point, though the train of events that unfolded had deep roots in past U.S. fiscal and monetary policy, particularly during the Vietnam War period, and in global structural changes that, since World War II, had brought about a diminution of the overwhelming preeminence of the U.S. economy. The episode revolves around the events starting with March 1, 1968, a date which marks a symbolic turning point. On that day the London gold market was besieged by buyers. Its normal level of sales, 3 or 4 tons per day, suddenly shot up to 40. Within two weeks, it was 10 times as high, forcing the U.S. Treasury to sell a million dollars of gold from its inventory every two or three minutes, a drain that should have exhausted its stock within weeks. The gold binge was on, with a spectacular rise in gold prices to levels in excess of $ 800 per troy ounce. Meanwhile, in mid March, Treasury Secretary Connally opted to restrict the sale of gold to exclude private buyers on the London gold market and asked governments not to convert their dollar holdings into gold, lest it further undermine the value of their own reserves, which were largely in dollars.

This measure was a desperate move to meet the collapse of the public's confidence in the willingness of the U.S. administration to maintain the dollar at

[10] *International Economic and World Order,* the Motta Lecture, Washingoton, D.C., Sept. 24, 1984, mimeo.

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the parity postulated in the Bretton Woods agreement. During the Vietnam War, the United States had embarked on an inflationary course in its monetary and fiscal policies, a choice that was made in response to domestic political considerations. Over the next three years, no effective steps were taken to reassure foreign holders of U.S. dollars that the value would not erode further. Thus, this 1968 decision was the inexorable prelude to the 1971 decision to formally announce the closing of the gold window, which, in effect, precluded even central banks from converting their dollar holdings into gold. This was the action that formally broke what Professor Richard Cooper called "the Bretton Woods bargain."[11]

The subsequent history—leading up through the recession and shocks of the 1970s to its culmination in the present global debt crisis—attests to the high price paid by all for breaking an agreement of this kind, which had set forth the "rules of the game" and is in the nature of an international public good or service.[12] There is obviously a compelling need in a highly integrated economic world for an international economic and financial *modus operandi* based on collectively acceptable and collectively enforceable behavioural rules that would temper the pursuit of short-term parochial interests, or constrain the formulation of national policies by factoring in broader obligations. Leadership is called for to provide those international public goods necessary for global growth.

(F) Will the United States Have to Acquiesce to a New Bretton Woods?

As unfolding events continue to demonstrate that the present conditions are not sustainable and that current policies and institutional arrangements will not suffice, more favorable consideration is being given to a policy of global policy coordination on trade and capital issues that lay at the heart of the original Bretton Woods agreement and on other matters related to global environmental threats. This time, the participation will not likely be done in the spirit that characterized the U.S. role at Bretton Woods in 1944. The exceptional circumstances of that period enabled the U.S. policy makers to formally assume global economic obligations despite the opposition of vociferous isolationist members of the Senate. The overwhelming dominance of the United States assured a coincidence of interest between what was in the U.S. interest and what was ostensibly in the global interest.

But there was also a measure of compassion in this international policy position. The United States had emerged from World War II as the recognized

[11] "A Monetary System for the Future", *Foreign Affairs,* Fall 1984. Professor Cooper, former Undersecretary for Economic Affairs, writes that the Bretton Woods agreement was an understanding or a bargain whereby the U.S. was to play a pivotal role as stabilizer of the international financial system by exercising an overwhelming measure of control over key features of that system such as global money supply and exchange rates.

[12] A congressional committee study estimated that for the U.S. alone the direct results of the reduction in Latin America's capacity to pay for imports could be measured by a 20% increase in the U.S. trade deficit and the loss of between 800,000 and 1,400,000 jobs.

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leading economic power whose industrial might topped that of the rest of the world combined, a world exhausted from the ravages of war. While both mood and circumstances have changed over the intervening decade, the background provides a perspective on the current pressures and the limited choices now open to the U.S. leadership. The preparatory work leading up to the Bretton Woods conference was begun after the decisive victories at Stalingrad and El Alamein, when thoughts began to turn from exclusive concern with survival to the more mundane, yet vital, issues of the kind of world that would, or could be made to emerge from the carnage. These very special circumstances made it both imperative and feasible to contemplate imaginative institutional intitiatives.

It was believed that in the aftermath of the war there would be a clean slate on which to write the framework of guiding principles for future economic and financial arrangements. Thus, international curency proposals were being put forward and ideas for new institutional agencies were being forged before the war had ended. There was a widely held view that out of the crucible of breakdown would emerge innovative arrangements to facilitate trade and thus growth with financial institutional arrangements in the service of trade. The arrangements were guided by an attitude that one observer identified as "a conscious political and moral reaction against prewar conditions."[13]

While the Bretton Woods conference had a very exceptional mandate and there is little literal resemblance between the years predating Bretton Woods and today's conditions, one common feature is an awareness that a crisis has occurred that portends major change, whether willed or not. It thus seems safe to say that a breakthrough action will occur soon. The pressures are building too fast and too awesomely for even the cynics to be complacent. They, too, must answer to the consequences of continuing on a business-as-usual course or trying to manage the debt problem as if the old rules apply and pretend that a few dollops of extra cash are all that is necessary to sweeten the bitter pill of adjustment.

It matters whether the movement toward a new Bretton Woods is made by design or forced by events. The preferred method is to be guided by forethought and design, but even the second-best route to the destination may suffice—if we don't fall off the figurative cliff in the meantime. Once the current debt crisis is seen as an integral part of a deep-seated transformation of the global economic and financial system, the door is open to considering policy approaches that have the breadth and depth commensurate to the problem.

There is a growing recognition that a turning point requiring a series of hard choices is imminent. There is, however, less recognition that the profound changes wrought over the past four decades are of a structural nature both in terms of (1) how trade and finance are handled and the size and direction of these flows, and (2) the ability of the United States to take on the type of leadership responsibilities that were assumed at Bretton Woods and the necessity of sharing such leadership

[13]Joseph Steindl, "Stagnation Theory and Stagnation Policy", *Cambridge Journal of Economics*, October 1979, p. 8.

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with Japan, Germany and other nations. These changes are basic to any resolution of the debt crisis. The need is for *systemic* measures to overcome the larger problem of which the debt crisis forms a part. The exact features of any eventual agreement will not resemble the 1944 version any more than the circumstances of the two periods resemble each other, but the underlying principles of institutional arrangements of policy discipline will bear very close resemblance.

(G) The Bretton Woods II Agenda Items

The agenda would include the full range of issues that directly affect the debt burden, such as volatile exchange rate movements, high real interest rate levels, low commodity prices compounded by increasingly unfavorable terms of trade, growing protectionism, stagnant official aid, declining private cash flows, *and* environmental degradation that are induced by the poverty of the debtor developing countries, and so on. It would be a full agenda but the core ideas are limited to a few:

(i) how to make operational the policy discipline and the policy coordination so as to stabilize or dampen fluctuations in exchange rates, make trade and capital flows more conducive to healthy growth and so forth,

(ii) how to bring interest rates down to their historic levels and keep them steady,

(iii) how to get aid flows up toward the 0.7 per cent of GNP target and beyond.

The drafters of the guidelines for a new Bretton Woods agreement will have two advantages—the perspective that comes with experience and the existence of two seasoned institutions, the World Bank and the International Monetary Fund and a panoply of related regional development banks and agencies within the U.N. system and a host of non-governmental organizations (NGOs) that are very watchful and involved. New paths will have to be charted in the fulfilment of their present reality and the formidable challenges ahead implies a central role for these institutions. Mahbub ul Haq, one of the governors of the IMF at the 1985 World Bank/IMG Annual Meeting posed the question:

> "Can we select for (the annual meeting of) 1986 the theme of a fundamental restructuring of the Bretton Woods institutions? Instead of slogans of a second Bretton Woods, can we analyze the past 40 years' experience dispassionately . . . and offer some constructive solutions?"

The challenge was never taken up. But it is still pertinent, indeed more urgent than ever, especially when both the energy and the environmental implications of the international financial condition are brought into the picture. It is becoming more and more difficult to deal with any one aspect in isolation, given the growing interdependency of the energy, environment and debt crises.

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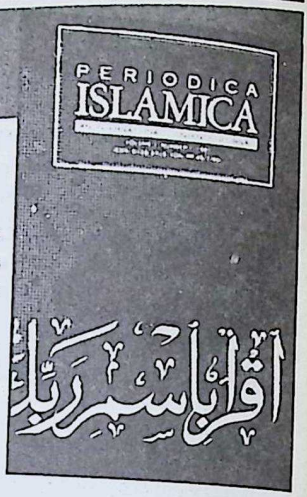

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POVERTY IN THE DEVELOPING COUNTRIES: STUMBLING BLOCK TO A GLOBAL ENVIRONMENTAL POLICY?

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"Development" may be understood as a process defined by qualitative goals, leading to better satisfaction of basic needs, strengthening the growth of democracy, and proceeding in an environmentally responsible manner. By this yardstick, development theory advocating quantitative growth alone has proven to be a failure. The continuing poverty of large population groups and of governments leads people to follow courses of action that are ecologically harmful, while also leading to families with large number of children. Sooner or later, however, runaway population growth will, like uncontrolled consumption, overload the carrying capacity of the planet's ecosystem. Development strategies geared to economic growth are based on the concept of imitating the economic successes of the industrial countries, and they lead straight to an ecological dead-end. The North's future ecological policy vis-à-vis the developing countries should hinge on seven guiding principles: the need to keep our own house in order;inclusion of the developing countries in global environmental polycymaking; financing of costs on a "polluter pays" basis; ensuring that exports are compatible with the environment; influencing international institutions; strengthening environmental movements in the developing countries;and changing the international rules of the game to favor the disadvantaged. The growth dogma is out, and moderation is in. Switzerland is taken to exemplify these general considerations.

Three Dimensions of "Development"

The private relief institutions have for many years viewed "development" as a three-dimensional concept: (1) The individual should be able to satisfy his basic material and spiritual needs, for food, shelter, dignity, etc. (2) The individual should be able to participate in decision-making and influence the way his community is governed. (3) Economic change should proceed in sustainable harmony with the environment. Similar basic principles are contained in the 1976 Swiss Federal Law on International Development Cooperation and Humanitarian Aid.

The translation of these theoretical guiding principles into practical action is a never-ending process. Above all, we cannot overlook the fact that many

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participants in the Third World (governments, development banks etc.) continue to equate development with economic growth. And with everyone worrying about quantitative progress, quality generally gets relegated to the background.

Failure of Growth-Oriented Development Policy

The theory of development economics that proclaims poverty a problem and growth its solution has all too often created misery in less materialistic cultures where "less is enough" (Wittpoth, 1990), since it is based on false premises.

A first, firmly entrenched assumption relates to the trickle-down effect, i.e. the idea that everyone benefits in the end from increasing prosperity, since it automatically precolates down to the poorest segments of the population. A glance at the true situation of countless developing countries serves to give the lie to that assumption: alongside tiny islands of growth there are hosts of poor people whom economic progress has left untouched or, worse, has crushed. On the other hand, real economic success stories such as Korea demonstrate that structural measures such as land reform are the key to broader distribution of the new prosperity. A growth policy does nothing for the poor if they do not at the same time have better access to productive resources such as land, water, credit and education. But politically, it is naturally more comfortable and more profitable to believe that things happen automatically, rather than to actively attack the evil of poverty at its roots.

A second, widely held misconception is that export-oriented integration into the world market is generally the best prescription for development. Economists can prove that this maximizes global GNP. However, it is not the quantity of goods and services that is the major problem of the world economy, but their distribution, both internationally and within individual countries. Just as the trickle-down effect is an illusion at the national level, there is also a misconception about what happens at the international level, i.e. the weak do not automatically benefit whenever more goods become available. This truism is obviously very familiar to our Swiss farmers, as they struggle to defend their livelihood against the threat of the world market in the lead-up to the Uruguay Round. As in agriculture, free trade and world market integration are generally the preferred solutions of the market leaders, because these concepts represent what will be most beneficial to them. However, the most suitable export/domestic market mix for the economically weak developing countries has to be redefined in each individual case.

Thirdly, we have no grounds for thinking that in all countries the supply of goods, i.e. economic activity, takes priority over political liberties. Nor does experience teach us that economic liberalization is automatically followed by political liberalization—on the contrary, structural adjustment in developing countries, geared to opening up the economy, has in the eighties often been accompanied by political repression. The freedom of farmers to organize, the right of association for workers, political rights in the state, these are all too often—and with the connivance or even outright support of economically involved foreign countries—sacrificed to economic growth, even though they are co-determinants

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in the distribution of increased prosperity. It is wrong, even in a poor country of the South, to assume that economic activity takes priority, unless this is democratically decided by the people themselves.

These considerations show why a development policy that has pledged to promote economic growth as its first priority will not eliminate poverty. Economic growth can certainly be a by-product of development processes in the above-mentioned sense; in the Third World this may even be the norm. But the key to development lies in its quality, not quantity, i.e. in the immediate benefits it produces for the general populace. Without a break from traditional growth policies, in the developing countries as well, and without clearly defined quantitative priorities, it will not be possible to overcome poverty.

Ecological Consequences of Poverty

It is now time to look at the ecological consequences of poverty and inequitable income distribution. Let us start at the government level. Fiscal problems are an obvious and immediate consequence of public poverty. For example, the Himalayan State of Bhutan has a current expenditure budget of approximately SwF 90 million a year. With this, it has to provide basic services for a population about the same size as that of the Canton of Zurich, whose budget is SwF 6,800 million (1988). In such circumstances, all nonpriority areas stand no chance whatsoever, and environmental concerns have been and continue to be regarded in many developing countries as a luxury.

When a country also has an external debt burden, it has to acquire the necessary foreign exchange for interest and principal payments. This pressure to secure foreign exchange leads to ruthless exploitation of natural resources, often against people's better judgement. For example, the rain forest is subject to constant lumbering for the sake of short-term income—not to improve the country's own living standards, but to pay off creditors in the industrial countries. Again, in Mauritius, the people consciously put up with the environmental pollution resulting from tourism, while our tourists enjoy hidden subsidization of their vacations. Ghana's Environmental Department Chief made a very illuminating remark when she advocated a strict and internationally monitored ban on exports of toxic waste to Africa, "so that we are not offered large sums of money that could tempt us to do stupid things"..

For individuals also, poverty narrows the possibility of choosing the ecologically preferable of two alternatives. If people have to worry about their immediate survival, they will have little interest in future benefits, and in many countries slash-and-burn practices continue over large areas. When there is liberalization without safeguards, small farmers may find themselves defenseless against production and export offensives mounted by large-scale producers. Thus the economic pressure on the small farmers is perforce shifted onto nature.

Above all, people living in poverty and misery are likely to have large numbers of children, as a way to ensure they will be cared for in their old age. For family planning to be successful, therefore, people must be assured of

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sufficient income and of provision for their old age. Sooner or later, runaway population growth will overload the carrying capacity of our planet's ecosystem. Uncertainty about sheer survival is, however, also one of the many reasons why people migrate to the cities and to other countries looking for a better future. And the North, in turn, has to face the ecological impact of migration.

While widespread poverty can reduce market opportunities for the business world, companies can also take advantage of the fact that countries are competing with one another in offering the most favorable investment terms. Without a subsidized, non-market determined energy price, the aluminium industry in Egypt would never have gotten established. Competition for the most favourable location can take forms that are absolutely ruinous, both economically and ecologically.

Increasing international attention is now being paid to global environmental issues, such as protection of the ozone layer, global warming, preservation of biodiversity, and reduction of pollution in international waters. These four areas are expressly targeted by the World Bank's "Global Environmental Facility". In all four cases, the industrial countries are the major polluters. In all four cases, the industrial countries' environmental policy will come to a dead-end if the South is not included in a global policy. For the developing countries are already doing their part to aggravate the problems, and their share of the responsibility will become even greater as their populations grow. And should they successfully imitate the policy of economic growth, any environmental successes achieved in the North will then be cancelled out by the South.

Imitation Strategy—An Ecological Dead-end

The Swiss Julius Bär Bank noted in one of its weekly reports (No. 25 of July 6, 1989) that: "It has gradually become apparent in the industrial countries that quantitative economic growth is linked to an enormous consumption of nonrenewable resources of all kinds. Production increases have in fact usually depended to no small extent on the use of energy, and thus on the consumption of geological capital, which has not been regenerated. This ruthless exploitation has affected animals and plant species, and lead to soil depletion, deforestation, and reduction of the fish population . . . Should the South follow a policy similar to that of the North, the carrying capacity of the planet's ecosystem will be overloaded. From this we may draw a convincing conclusion: economic development cannot continue to take the forms it has traditionally taken in the old industrial countries . . . Seen in this light the imitation strategy seems as questionable for the developing countries as the tendency of the industrial countries to encourage such imitation."

These assertions by a leading financial concern are remarkable. However, if the aim were simply to ensure as smooth as possible a continuation of the existing lifestyles of the rich minority in the North, it would be hard to convince anyone in the developing countries. To be credible, the north must first rethink its own development. The concept of development stated at the beginning (meeting of

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basic needs, participation, environment) basically implies that every society has its own development problems—and this includes the North. On the other hand, economic growth, as a yardstick of development, automatically implies that the South should emulate the North as a successful model.

The "ecologization" of the Northern economies will not only give us credibility but also provide us with a technical basis for not facing the developing countries empty-handed. For, as everyone knows, people can only pass on what they themselves are and have. This ecological structural adjustment in the industrial countries is the counterpart of the economic structural adjustment that the IMF and World Bank are imposing on the heavily indebted developing countries. But we Swiss are still not very inclined to reorient our economy and mode of living along ecologically sound lines; this topic is not mentioned in the Bär Bank's article.

How can these relationships between growth, poverty and environment affect the policy of the wealthy countries? What possibilities does Switzerland have for adopting an environment-oriented development policy? The following reflections on the key guiding principles of such a policy should lead to some ideas for answers to those questions.

Keeping Our Own House in Order

However nice and cozy this principle may sound, it is explosive in the global ecological perspective. In the industrial countries, strains on the environment in such areas as resource depletion and pollution emissions need to be brought down to a level per capita sufficiently low, for all people in both North and South, to ensure that the global climate, biodiversity, and air and water quality will not be irreversibly altered through human agency. This basic principle was categorically enunciated over 200 years ago by Immanuel Kant, when he said: "Act only on that maxim through which you can at the same time will that it should become a universal law."

In the case of carbon dioxide, for example, this means reducing the present volume of emissions, over the medium to long term, by around two-thirds. So long as our policymakers are not prepared to pursue this goal, we are consciously accepting a lifestyle which, ecologically speaking, is based on the fact that it will be beyond the reach of most of mankind. The developing countries can, however, justifiably claim that they have a large economic gap to make up, and this, even if their development is highly quality-oriented, will add to the present overload on the environment. If this gap is to be closed, without harming the environment and in the context of continuing population growth, the North must reduce its emissions accordingly.

Keeping our own house in order also includes dealing with the problem of waste. In order to effectively implement a ban on toxic waste exports, to the Third World in particular, waste production must be drastically curbed. And for the volume of waste that will still continue to be generated, disposal facilities must be provided within each individual country. This also goes for radioactive waste.

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It is true that everyone pays lip service to the idea of domestic disposal facilities, but such facilities do not yet exist in Switzerland. When, despite the basic principle of domestic disposal, ecologically minded groups try to prevent exploration of possible sites for the necessary facilities, or when the Swiss Government signs a nuclear agreement with China that provides for the disposal of Swiss atomic waste in that country, then we are not being honest with ourselves and others.

Including the Developing Countries in Global Environmental Policymaking

We cannot disregard the danger that the in itself laudable principle of "One World" dengerate into a new, ecologically based claim for hegemony on the part of the First World. This is the case, for example, when recalcitrant developing countries, which do not want to "subject" themselves unconditionally to the consequences of the new ecological findings, are threatened with trade sanctions. When India, for example, at the Environmental Conference [sic] of the Council of Europe in Ottawa (*Neue Zürcher Zeitung,* June 14, 1990), with good reason asked for additional development aid to finance its contribution to protection of the ozone layer, the European politicians were extremely put out, saying that the West wasn't going to play Santa Claus, and threatening unruly countries with trade sanctions. Such experiences led the developing countries in the GATT to view with great suspicion a recent initiative of the EFTA countries, including Switzerland, which proposed linking trade to environment (Rongead, 1991, p. 13).

The practical necessity of including the Third Worid in environmental policymaking has already been discussed. What we now need to ask is just how this is to be accomplished. Financial incentives should also be the best way of helping ecological reason to prevail. It has been estimated that, in 1980, the developing countries would have had to incur some $ 14 billion in additional environmental protection expenses in order to meet the USA's environmental standard of the time (Shrybman, 1990). With additional financial resources, new ecological options would be accessible to a poor nation.

In terms of financial incentives, an industrial country could, for example, consider taking over the additional expenditure arising out of the use of technologies and products that cost more but are less harmful to the environment. An initial example is to be found within the framework of the revised Montreal Protocol on Substances that Deplete the Ozone Layer. The Protocol calls for a $ 160 million fund for the years 1991–1993, to be provided by the industrial countries (the amount possibly being increased to $ 240 million, if China and India join). The Fund would help industry to convert to procedures that will not harm the ozone layer; following the ban on CFCs for food refrigeration plants, etc., even larger investments could be financed. Similar problems and financing needs arise also in such areas as global warming, maintenance of biodiversity, etc.

In view of their pressing everyday concerns, the developing countries are not likely to be motivated, without such financial incentives, to adopt technologies that are more friendly to the environment, especially after the industrial countries

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have boosted their own economies using cheaper but environmentally damaging methods. In addition to assistance in the financial area, the industrial countries must be prepared to agree to an effective transfer of environmentally friendly technologies. Because modern technology is generally in private hands, the offer of financial incentives would again be the deciding factor in getting purveyors of such technology to agree to such transfers.

Not only should the additional costs be transferred to the industrial countries, but also the loss of earnings deriving from ecologically dictated nonexploitation of natural resources. Preservation of the primary tropical forests is a case in point. Sustainable exploitation along traditional lines, by hunters and gatherers, would have to be regarded in the same way as nonexploitation.

Integrating the developing countries into the worldwide ecological cooperation effort also means alowing them equal participation at the international negotiating table. Switzerland has already on occasion assumed the costs of participation of Third World delegations. This practice should be intensified and expanded to include the participation of representatives of private environmental institutions in those countries. Training could also be provided to ensure a balanced representation of the Third World countries as the switchover to an ecologically minded approach is negotiated.

Financing of Costs on a "Polluter Pays" Basis

The costs that the industrial countries will have to bear including the developing countries in global environmental policy should be financed primarily through aplication of the "polluter pays" principle, in conjunction with appropriate control measures, and only secondarily from general tax revenues. This method of financing will create environmental policy credibility for the industrial countries and help correct our frequent tendency to seek to resolve problems with money and technology alone and so avoid any behavioral changes or structural adjustments on our own part.

Financing on a "polluter pays" basis could for instance be considered for an earmarked CO_2 levy, to lessen fossil fuel consumption and at the same time to generate funds for ecological measures in developing countries. A Swiss Government working group has already drafted proposals for a CO_2 levy which have basically been approved by the Federal Council. To prevent a CO_2 levy indirectly promoting nuclear energy and thus making a bad situation worse, a general energy levy could also be considered—an idea on which, for instance, the European environmental associations look with favor. The idea of an "ecobonus" could be applied to gasoline only or to energy or raw materials in general.

The idea developed in the Swiss context of the "landscape prevention levy" could serve to promote renunciation of use of rivers and streams for power generation and would be payable by power users. In the same way, consideration could be given to rewarding renunciation of present day use of tropical forests, which as a rule ends in destruction of their ecological substance, and funding this

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by means of a "tropical forest levy" that could also be imposed on emissions such as CO_2 that impact the climate.

The United Nations Environment Programme has proposed controlling global CO_2 emission by setting quantitative goals and the issuance of negotiable emission certificates. These certificates would be issued to individual countries on the basis of their population and would represent entitlement to cause environmental pollution within the limits specified. Third World countries with below-average CO_2 emission would be able to sell unwanted certificates to polluting industrial countries. By means of successive reduction in the quantitative goals, total emissions can be reduced and pollution penalized and good behavior rewarded in a manner entirely consistent with free-market principles. This model deserves careful examination, for Switzerland too.

Ensuring that Exports are Compatible with the Environment

The weakness of the State in many developing countries means that they are often overstretched when it comes to verifying that projects and imports are not environmentally harmful. It is a common theme in multilateral fora such as UNEP and FAO that the industrial countries, who usually feature as suppliers, bear a heavy responsibility in this connection. The unequivocal claims on the part of the developing countries also clearly show that the question of respecting the developing countries' sovereignty in no way hinders a positive contribution by the industrial countries. In this connection the rich countries' contribution should go beyond the provision of training or financing of needed facilities, and could for example include renunciation of the sale of hazardous goods.

Thus for trade in hazardous chemicals UNEP has incorporated the principle of "prior informed consent" into the London Directives of June 1989. This means that exports of prohibited or restricted chemicals to developing countries would only be permitted with the express consent of the appropriate authorities of the importing country. The international code put out by FAO for pesticide application and use contains an identical requirement, adopted in the face of strong resistance from many industrial countries, including Switzerland.

As the headquarters country for major chemical companies, Switzerland bears a heavy responsibility that has, however, been ignored to date. Switzerland has in fact dropped expansion of the provisions of the relevant legislation (Materials Ordinance), although it did finally approve the rules in the multilateral fora, and has contented itself with self-policing by the Swiss Chemical Industry Association in the framework of its code of behavior for reporting of exports. The shortcomings of gentlemen's agreements are well known: they only apply to members, the parties define their scope themselves, and there are no penalties for noncompliance.There are similar problems with the amendment of the environmental protection law currently under debate, as far as regulations covering environmentally harmful organisms are concerned. The Federal Council bill does

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not include a word about exports, which ought to be regulated at least in the "prior informed consent" sense.

The development aid organizations have long criticized the fact that environmental impact assessments, as presently stipulated in environmental legislation, are only required for domestic projects. EIAs would be appropriate for major development projects supported by Switzerland, whether through technical assistance or financial aid, mixed credit or export guarantees. The initial steps are under way in regard to development cooperation, but it will be an uphill struggle before EIAs are made mandatory for all projects abroad, funded or supported by Switzerland.

Influencing International Institutions

The role of international institutions in regard to growth, poverty and the environment is significant and forms an entire topic in itself. The IMF, the World Bank, the regional development banks (Inter-American, Asian, African and now also the European Development Bank) are all involved. Following a wave of heated criticism of many of the projects financed by these banks, they are now taking ecological criteria and goals much more into account than they used to. How far this turnaround will move beyond paper to actual project practice remains to be seen. Even the IMF is beginning to consider the ecological implications of its monetary policy prescriptions, though this is still in a very early stage.

With international negotiations currently in progress, reference must also be made to GATT. The General Agreement on Tariffs and Trade is a powerful motor for the expansion of world trade. In seeking to underscore the significance of the present Uruguay round, President Bush recently emphasized that it was not just trade, but world economic growth, that was at stake. However, as long as environmental pollution (e.g. air pollution by air transport) is not fully included in product prices but is shifted to society as a whole, free trade is going to lead to ruinous competition at the expense of nature. The worldwide harmonization of environmental standards now being pursued, the liberalization of agricultural policy and other items currently under negotiation, are causes for equal concern for ecologically committed organisations in North and South. Review of the GATT agreement from an ecologycal standpoint is what is needed—GATT could also offer opportunities, if the political will is there.

Switzerland is a party to GATT and a member of all the regional development banks and practically all the UN specialized agencies, but not of the IMF or the World Bank. A possible decision to join the IMF and the World Bank should include safeguards to ensure that Switzerland will commit itself —if it does in fact join these organisations—to encouraging compliance with the social and ecological criteria laid down in the Federal Law on International Development Cooperation and Humanitarian Aid.

Strengthening of Environmental Movements in Developing Countries

The current interest in environmental questions in Switzerland derives largely

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from the active role played by private environmental organizations for many years. This is also significant for environmental policy. In various Third World countries a growing number of private environmental movements are seeking to arouse and heighten environmental awareness in government and business circles and among the population at large. For example, Sahabat Alam Malaysia (SAM) is supporting the local population in Sarawak in their resistance to the destruction of Borneo's rain forest. Such initiatives are deserving of greater outside assistance. This is already being done in some cases: for instance, Helvetas, the Swiss Association for Development and Cooperation, has been helping to fund SAM for some years now. Local environmental organizations also have a growing role to play in resisting oversized megaprojects or in having environmentally harmful industries moved (e.g. paper mill in Indonesia).

The Swiss Government for its part should also use its diplomatic channels as well as financial resources to foster a liberal attitude by governments to private initiatives. SAM for instance was exposed to arbitrary arrests. Environmental organisations do in fact often find themselves on collision course with the government or business interests. Environmental movements therefore need a considerable degree of political tolerance in order to perform their functions. This applies in Switzerland just as much as in the Third World. In this respect, democratization and improvement in the human rights situation in the poor countries would also have a direct and definite impact in the ecological sphere. If this can also be used to foster broad support among the protection of the environment, the end result will be positive in encouraging the passage and enforcement of environmental legislation.

Changing the International Rules of the Game to Favor the Disadvantaged

If our aim is to solve the world's most pressing environmental problems, we simply cannot ignore the Third World and its poverty. Failure to recognize the ecological consequences of poverty would definitely become a stumbling block for environmental policy in the industrial countries. After all, the difficulties in the way of attaining lasting and broad-based development of the type referred to at the beginning of this paper in all countries are bound to be greater than the ecologists imagine today.

For the elimination of poverty and destitution is not something that we can accomplish by ourselves alone. The Third World must assume responsibility for its own development, and also for its mistakes and other priorities. However, the industrial countries, and Switzerland as the world's richest country, could do more. Besides the basic concepts for an international ecological policy listed earlier, what needs to be done is primarily to change the rules of the international economic game in such a way that the weaker partners will gain more, instead of constantly seeing their efforts undermined by, for instance, falling commodity prices. Ernst Ulrich von Weizsäcker, Director of the Institute for European Environmental Policy in Bonn, states bluntly that: "The world market is the

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greatest incentive for the despoiling of nature in the developing countries" (*Die Zeit*, October 12, 1990).

Abandoning the Growth Dogma

At the Basel Hazardous Waste Conference of March 20, 1989, the Swiss Minister for Environment, Flavio Cotti, put it like this: "Protection of the environment causes us to rethink our entire system of economic relations. It is no longer enough to treat the symptoms. What is now urgently needed is a change in attitude that must be as far-reaching as the destruction of our environment." The dogma of economic growth—as the primary aim of development policy and as the guiding precept of our own economic policy—will not survive this sort of scrutiny.

The "One World" option must not be used simply to continue the westernization of the globe under an ecological lable or even to formulate a new, "green" claim to hegemony. The abandonment of the growth dogma amounts rather to a questioning of the Northern economic system and way of life. A change in values is already discernible, in the direction of a culture of sufficiency that is new for us: to the extent that the irresistible force of reckless modernization has not already destroyed them, there is much that we can learn from cultures in developing countries in this respect.

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ECONOMIC PARTICIPATION OF WOMEN IN SOUTH ASIA: A SYNOPTIC VIEW

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Female labour force participation rates are generally considered to be an indicator of economic development of a nation. Higher levels of industrialization and the consequent increases in the social division of labour and the emancipation of women from the fetters of customs, traditions and social taboos are generally associated with higher activity rates of women. Even in the relatively backward Asia, more advanced countries like China, Hong Kong, Japan and the Republic of Korea account for reasonably high female labour participation. But in the poor South Asian region, the activity rates of women are abysmally low, while the activity rates of the men are not significantly lower than that of the South East Asian nations.

TABLE 1
LABOUR PARTICIPATION RATES OF MALES AND FEMALES IN SELECTED ASIAN COUNTRIES

S.No.	Country	Year	Participation rate (per cent)	
			Male	Female
1.	China	1982	57.3	47.0
2.	Hong Kong	1986	61.9	39.6
3.	Japan	1987	60.9	39.1
4.	Korea, Republic of	1987	47.8	32.3
5.	India	1981	52.7	19.8
6.	Bangladesh	1984–85	53.8	5.6
7.	Nepal	1981	58.2	32.4
8.	Pakistan	1984–85	51.7	5.8
9.	Sri Lanka	1985	52.7	25.4

Source : A.V. Jose (Ed.), *Limited Options, Women Workers in Rural India,* ILO, ARTEP, 1989, p. 2, Table 1.1.

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There is a point of view that the lower worker partcipation rates in South Asia can be attributed to methodological problems involved in the collection of female participation data. A number of conceptual and measurement problems right from the definition of female labour participation down to the gender bias of the data collecting agencies have been pointed out[1]. Had it been possible to evolve an alternate methodology to assess the labour force participation rates of women after adjusting for the necessary conceptual and measurement difficulties, it would have been perhaps possible to arrive at substantially higher figures than those currently obtaining in these countries[2].

Notwithstanding the above mentioned methodological problems, there still exists the problem of lower participation rates for women and their inter-regional variations in South Asia. As may be seen from Table 2, there are significant variations in the rates across countries. While Maldives, Sri Lanka and Nepal account for relatively high participation rates, these figures for Bangladesh and Pakistan are extremely low. India lies in between these two extremes. Further, when the variations between the different age groups within each country are considered, it is found that even among the younger people, the women participation rates do not appear to be significantly different from that for all age groups in Bangladesh. But in the case of India, Maldives, Sri Lanka and even Pakistan, there are significant variations across age groups.

TABLE 2
SOUTH ASIA: ACTIVITY RATES BY AGE GROUP

Age group	Bangladesh (1984–85)		India (1981)		Maldives (1977)	
	Male	Female	Male	Female	Male	Female
10–14	37.7	7.7	6.0[a]	4.3[a]	19.8[b]	12.5[b]
15–19	70.4	7.3	53.2	26.3	78.0	52.2
20–24	85.4	8.5	79.0	29.3	93.4	62.1
25–29	97.7	8.3	92.6	32.1	95.0	64.7
30–34	99.0	8.9	96.7	34.7	95.7	64.8
35–39	99.7	9.0	97.8	36.4	96.5	70.7
40–44	98.4	8.3	97.5	36.1	96.8	71.9
45–49	98.4	8.2			97.0	73.3
50–54	98.5	8.5	93.3	29.8	95.5	68.1
55–59	94.7	8.0			93.8	61.5
60–64	91.8	7.3	65.1	14.0	87.5	52.3
65+	72.9	9.9	40.7	17.5	80.5	40.6
Total	53.8	5.6	52.7	19.8	—	—

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TABLE 2 (Contd.)

Age group	Nepal (1981)		Pakistan (1984–85)		Sri Lanka (1985)	
	Male	Female	Male	Female	Male	Female
10–14	61.3	52.0	34.8	6.6	6.8	4.2
15–19	69.2	51.3	65.5	8.5	45.5	24.2
20–24	86.3	47.6	89.1	8.6	87.4	48.3
25–29	93.4	44.9	97.9	9.7	96.7	46.2
30–34	95.3	43.3	98.9	11.1	96.2	44.9
35–39	95.8	44.1	98.9	11.7	97.9	45.1
40–44	96.0	44.7	99.0	10.5	96.3	45.0
45–49	96.4	44.9	98.8	11.4	95.8	42.2
50–54	94.3	44.7	98.2	9.1	91.4	38.0
55–59	92.2	43.3	95.4	5.9	84.5	26.1
60–64	83.3	39.9	84.9	5.8	67.1	22.5
65+	58.7	35.0	55.0	2.9	44.8	10.7
Total	58.2	32.4	51.7	5.8	—	—

Source: ILO, "Yearbook of Labour Statistics", Various Issues.

Notes: 1. India excluding Assam. a: Age Group 10–14 refers to 0–14.
2. Pakistan excluding Jammu & Kashmir. b: Age Group 10–14 refers to 5–14.

It is often argued that high female literacy, lower child mortality rates and the associated reduction in fertility would lead to higher female participation rates. Some studies relating to the Indian situation indicate that the inter-state variations are explained to a large extent by variations in fertility rates, burdens of child bearing and child rearing and the chores of domestic duty[3]. But whatever data is collected in Table 3 do not bear out this hypothesis fully in relation to the Asian countries. Maternal mortality rates and infant mortality rates do not show any correlation with participation rates except in the case of Sri Lanka. These rates are very high for Nepal, but it has a high female participation rate showing a positive association. For Bangladesh and Pakistan both the rates are low. Similarly, the education levels expressed in terms of females per 100 males both for primary and secondary stage do not show any systematic relation with participation rates. Levels of economic development measured in terms of per capita income also do not seem to provide any satisfactory explanation to the variations in participation rates among the countries under investigation.

Table 4 presents the industrial distribution of the working force by sex. A majority of women in South Asia is employed in agriculture and allied activities,

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TABLE 3
SELECTED ECONOMIC AND DEMOGRAPHIC INDICATORS RELATING TO WOMEN IN SOUTH ASIA

South Asia	Health and Welfare							Education				Per capita income (dollars)
	Life expectancy at birth (Years)				Maternal mortality (per 100000 live births)	Infant mortality (per 1000 live births)		Females for 100 males				
	Female		Male					Primary		Secondary		
	65	87	65	87	1980	65	87	65	86	70	86	1987
Bangladesh	44	50	45	51	600	145	119	44	66	..	45	160
Bhutan	40	47	41	49	...	173	128	..	54	..	31	150
India	44	58	46	58	500	151	99	57	64	40	48	300
Nepal	40	50	41	52	850	173	128	..	41	16	30	160
Pakistan	44	54	47	55	600	150	109	31	50	25	38	350
Sri Lanka	64	73	63	68	90	63	33	86	93	101	109	400

Source: IBRD, "World Development Report", 1989.

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TABLE 4

TABLE 4
PERCENTAGE SHARE OF ECONOMICALLY ACTIVE POPULATION BY INDUSTRY AND BY SEX

Industry (Major divisions)	BANGLADESH			INDIA[1]			MALDIVES		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1.	2	3	4		6	7	8	9	10
1. Agriculture, Hunting, Forestry and Fishing	57.70	62.53	8.52	62.60	64.33	57.51	29.50	33.84	14.08
2. Mining and Quarrying	0.20	0.17	—	0.50	8.61	0.26	1.30	1.48	0.34
3. Manufacturing	8.70	6.89	27.53	10.30	11.86	5.76	22.10	12.51	56.70
4. Electricity, Gas and Water	0.20	0.25	—	0.30	0.52	0.04	1.00	1.22	0.03
5. Construction	1.70	1.84	0.36	1.50	1.78	0.56	4.90	6.18	0.32
6. Wholesale Trade, Restaurants and Hotels	11.50	12.00	0.55	5.00	6.27	1.27	10.40	12.53	2.68
7. Transport, Storage and Communication	3.80	4.15	0.43	2.50	3.26	0.27	6.30	7.85	1.01
8. Financing, Insurance, Real Estate Business	0.50	0.51	0.12	0.70	0.91	0.17	0.80	0.89	0.46
9. Community, Social, Personal Services	8.00	8.01	8.44	7.60	8.51	4.95	20.00	19.94	20.01
10. Not Adequately defined	5.90	2.06	44.85	9.00[a]	1.95[a]	29.20[a]	2.10	2.10	2.19
Unemployed	1.80	1.58	4.18	—	—	—	1.60	1.46	2.18
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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TABLE 4 (Contd.)

	Industry (Major divisions)	NEPAL			PAKISTAN[2]			SRI LANKA		
		Total	Males	Females	Total	Males	Females	Total	Males	Females
		11	12	13	14	15	16	17	18	19
1.	Agriculture, Hunting, Forestry and Fishing	91.10	88.71	95.75	51.10	51.66	36.39	42.40	42.11	42.94
2.	Mining and Quarrying	0.10	0.02	0.01	0.40	0.39	0.24	1.10	1.45	0.44
3.	Manufacturing	0.40	0.63	0.21	8.80	8.67	14.12	10.90	8.96	14.76
4.	Electricity, Gas and Water	0.10	0.06	0.01	0.60	0.59	0.24	0.30	0.51	0.04
5.	Construction	—	0.04	0.00	4.10	4.13	2.21	3.80	0.54	0.54
6.	Wholesale Trade, Restaurants and Hotels	1.60	2.08	0.69	9.10	9.26	5.68	8.60	10.24	5.25
7.	Transport, Storage & Communication	0.10	0.16	0.01	4.00	4.10	1.58	3.70	5.31	0.36
8.	Financing, Insurance, Real Estate Business	0.20	0.20	0.04	0.80	0.74	0.49	1.10	1.24	0.77
9.	Community, Social, Personal Services	4.50	5.98	1.92	13.20	12.73	27.43	10.60	9.43	12.92
10.	Not Adequately defined	1.90[a]	2.12[a]	1.35[a]	4.80	4.79	4.12	3.40	4.57	1.19
	Unemployed	—	—	—	3.10	2.93	7.50	14.10	10.79	20.79
	Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: ILO, Year Book of Labour Statistics, 1985 and 1988.
Note: 1. India excluding Assam, 2. Pakistan excluding Jammu & Kashmir. a: Major division 0 includes marginal workers.

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the case of Bangladesh being an exception. The proportion is as low as 8.52 per cent for Bangladesh. Nepal tops the list with 95.7 per cent of the female labour force being in this sector. Women are excluded from rice cultivation at least in some parts of Bangladesh, while in the rest of South Asia rice absorbs a sizeable portion of the female work force. Labourers whose tasks are classified as 'not adequately defined' constitute 44.85 per cent in Bangladesh and 29.20 per cent in India. This proportion is very low in other countries. Probably, a good percentage of this category of workers are marginal workers in the agricultural sector in India and workers engaged in domestic and menial services in Bangladesh.

It is quite striking that 56.70 per cent of the women workers in Maldives are engaged in the manufacturing sector. The corresponding percentages for Bangladesh, Sri Lanka and Pakistan are 27.53, 14.76 and 14.12 respectively. Given the fact that none of these countries has a signifact manufacturing sector, it needs some explanation. These countries are characterised by the predominance of handloom and cottage industries and other traditional industries. Therefore, it may be interpreted that a major chunk of women workers in manufacturing is workers engaged in low-paid and unskilled activities in these sectors. It may be due to the low paying nature of the work that the proportion of men in manufacturing in these countries is found to be very low. The data relating to the occupation-wise distribution of the male and female work force presented in Table 5, provide further supporting evidence to this line of argument. The proportion of female workers attending to various tasks connected with production related work, operation of transport equipment etc. is appreciably high in Bangladesh and Maldives even in comparison with the corresponding male proportions. Even in Pakistan and Sri Lanka these proportions are significant even though not as high as that of men. This analysis seems to support the argument that there is a gender bias as far as modern technology is concerned. Evidence available from the Indian data shows that women are largely employed in activities using traditional technologies and female employment is relatively low in activities using modern technology[4]. A U.N. survey also has observed that the first labour displacing impact of the process of agricultural industrial modernization falls heavily on women[5]. Thus in South Asia, a very large number of women is forced to subsist on heavy and low-paid work in agriculture, cottage industries and the informal sector activities consisting of petty trade, domestic work, etc[6].

In explaining the low female labour participation rates, the broad socio-economic context obtaining in a country constitutes an important consideration. The way families are organized has implications for activity rates of women. In South Asia, the family structure is excessively dominated by men relegating women to a secondary position. An expression of this may be found in such social practices as seclusion of women, child marriage, prohibition of widow remarriage etc. No doubt these factors restrict the entry of women into the labour market. In countries like Bangladesh, women in rural areas are almost forbidden to enter the commodity markets as buyers or sellers[7].

Closely related to the constraints imposed by the structure and organization of

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TABLE 5
PERCENTAGE SHARE OF ECONOMICALLY ACTIVE POPULATION BY OCCUPATION AND BY SEX

Occupation (Major Groups)	BANGLADESH			INDIA[1]		
	Total	Males	Females	Total	Males	Females
1	2	3	4	5	6	7
0/1. Professional, Technical and Related Workers	2.50	2.40	3.08	2.90	3.11	2.30
2. Administrative and Managerial Workers	0.60	0.70	0.12	0.90	1.23	0.09
3. Clerical and Related Workers	2.40	2.46	1.58	3.10	3.85	0.75
4. Sales Workers	10.60	11.08	5.29	4.20	5.26	1.07
5. Service Workers	7.10	3.53	44.06	2.70	3.08	1.92
6. Agriculture, Animal Husbandry and Forestry Workers, Fishermen and Hunters	57.70	62.46	8.52	62.50	64.21	57.49
7—9. Production Related Workers, Transport equipment Operators and Labourers	16.00	14.62	30.41	13.90	16.33	6.79
x. Workers Not Classifiable by Occupation	1.30	1.17	2.72	9.80[a]	2.92[a]	29.59[a]
Unemployed	1.80	1.58	4.18	—	—	—
Total	100.00	100.00	100.00	100.00	100.00	100.00

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TABLE 5 (Contd.)

Occupation (Major Groups)	MALDIVES			PAKISTAN[2]			SRI LANKA		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1	8	9	10	11	12	13	14	15	16
0/1. Professional, Technical and Related Workers	9.10	9.26	8.36	3.70	3.28	15.35	4.60	3.43	6.91
2. Administrative and Managerial Workers	2.80	3.23	1.24	1.30	1.32	0.70	0.40	0.61	0.09
3. Clerical and Related Workers	6.30	6.07	7.22	3.10	3.07	2.53	4.70	5.22	3.62
4. Sales Workers	4.50	5.13	2.40	8.00	8.18	4.38	7.40	8.80	4.54
5. Service Workers	6.70	7.66	3.37	4.10	3.94	7.78	4.10	3.75	4.65
6. Agricultural, Animal Husbandry and Forestry Workers, Fishermen and Hunters	29.00	33.36	13.08	49.80	50.39	35.37	40.80	40.12	42.27
7—9. Production Related Workers, Transport equipment Operators and Labourers	36.80	29.93	61.44	24.80	24.80	24.04	23.80	27.06	17.10
x. Workers Not Classifiable by Occupation	3.20	3.90	0.81	2.10	2.10	2.34	0.10	0.22	0.02
Unemployed	1.60	1.46	2.08	3.10	2.93	7.50	14.10	10.79	20.79
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: ILO, "Yearbook of Labour Statistics", 1985 and 1988.
Note: 1. India excluding Assam, 2. Pakistan excluding Jammu & Kashmir. a: Occupation group x includes marginal workers.

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the families, are those associated with the pre-assigned gender roles of women. Women, in these societies, are overburdened with domestic works and responsibilities and they hardly get any time for work outside the precincts of the household. Moreover, the burden of domestic duties impedes the skill formation of women which in turn renders them unsuitable for taking up jobs which require skill and craftsmanship[8]. In point of fact, the inadequate labour market involvement of women compared to men is closely related to women's overwhelming primary role in the household. The age at marriage, burden of child bearing, extremely inadequate provision of creches for the children of working mothers, etc. are some of the other factors limiting female labour supply. It is also observed that higher male earnings have a depressing impact on female participation[10].

The influence of religion is yet another factor exercising control over the labour market entry of females. While some religions hold more advanced outlook on the gender roles of women, some other religions play a discriminatory role[11]. In Pakistan and Bangladesh, where the Islamic religion is quite pervasive even in the affairs of the state, female literacy and participation rates tend to be low. In India also, particularly in the northern parts, wherever there is Muslim domination, women's options have been circumscribed by traditional customs and attitudes[12]. Consequently, the majority of the women in such religions remains within the traditionally acceptable environments either by choice or by discrimination[13].

In order to fully address the issues related to female participation, it is required to look into a host of other factors. The pace and pattern of economic growth, urbanization process, diversification of rural economic activities, crop intensity, the commercialization of agriculture and changes in cropping pattern, technological change in agriculture and land-water management etc. need special consideration in this context. The asset base of the household and the degree of pauperization and economic differentiation are some other crucial factors which should help situate the issues in an appropriate context.

In conclusion, it may be pointed out that in recent years there has been some improvement in the status of women in the SAARC countries. Women are found increasingly entering politics, civil services, careers in media and communications and tertiary sector jobs such as that of secretaries, hostesses, receptionists, etc. It appears that younger women are attracted these days to many non-traditional jobs which have been hitherto considered male-dominated. However, unless a concerted effort to raise the status of women through a regional dialogue like the SAARC framework is made, much to be desired will be left. Considerable public policy intervention is required to facilitate an improved labour force participation of women.

Notes

Economically Active Population comprises all persons who furnish the supply of

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labour for the production of economic goods and services as defined by the U.N. Systems of National Accounts and Balances during a specified time reference period.

The classification according to industry is fundamentally different from that according to occupation. All persons working in a given industry (major divisions) are classed under the same industry irrespective of their particular occupations.

The classification according to occupation brings together individuals working in similar occupations irrespective of the industry in which the work is performed.

Due to independent estimation, the Tables 4 and 5 show totals which are slightly different from the totals of economically active population in Table 2.

The comparability of data is hampered on several grounds and, in particular, the activity rates of females are generally not comparable internationally.

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SMALL SCALE INDUSTRY SECTOR AND INCENTIVES: THE EMERGING SCENARIO

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The Government of India has a budget of Small-Scale Industry (SSI), apart from incentive schemes for its promotion. Is the industry well-equipped organisationally? Is there any trained and motivated manpower? Is there any simple system and procedure to implement the budget for the benefit of SSI? If not, why waste precious resources year-after-year on administering such schemes? Is it not proper to decide such schemes in consultation with the beneficiaries for whom they are meant? This paper attempts to focus on these issues with an emphasis on the rationale behind the present incentives package offered to SSI.

In spite of a plethora of government agencies at the state and central levels dealing with incentives for SSI, any new entrepreneur who wishes to set up a small-scale industrial unit has to move from pillar to post even to know what incentives he is eligible for! Thus, a majority of them, have no choice but to ignore such assistance and to concentrate on other means and efforts, such as bank loans and tax incentives. Any in-depth study made on the utilisation of incentive packages offered by the government for SSI would reveal that it cannot be availed due to bureaucratic impediments and procedural delays. In spite of this, the impressive growth that has taken place in the SSI sector is mainly due to the entrepreneur's sheer zeal and efforts.

Present Status

Today, in the context of the Indian economic planning, the small-scale sector is the one that needs closer understanding by administrators, economists, and technocrats. For it employes, 48 per cent of the total workforce in the manufacturing sector, accounts for more than 45 per cent of the total industrial production, worth rupees several thousand crores, and its exports exceed over Rs. 4,000 crores (Nagaiya., 1989). Here, an attempt has been made to compile some relevant perspectives on the small-scale industry with focus on three aspects, namely, present status, promotional measures of the Government of India, and impact of such measures, and the alternatives to make such incentive policies more effective. It is a pity that the government policy measures for the growth of SSI have been negated by the hurdles created in their implementation. It is thus

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apparent that the immense potential of this sector could be further nurtured if the industry representatives, and administrators at the block, sub-division, district, state and national level work together.

It has already been stated that though the SSI sector accounts for a small part of the total national income, it accounts for a substantial part of the total industrial production, and for a greater part of the total industrial employment. SSI has become a capital-saver, both in terms of labour and output. Because of its numerous units, SSI promotes greater competition and effieciency. It has also been visualised that through SSI sector economic opportunities would be equitably distributed,

TABLE 1
TRENDS IN SMALL INDUSTRY DEVELOPMENT

Year	No. of units (million)	Production (at current prices) (Rs. million)	Employment (million Nos.)	Investment (Rs. million)	Exports (at current prices) (Rs. million)
1874–75	0.50	92000	4.0	26970	5410
1979–80	0.81	216350	6.7	55400	12260
1984–85	1.24	50520	9.0	83800	23500
1989–90	1.94	1165000	16.6	166200	76260

Source: Nagaiya, D., *Small Scale Industries in India,* and *ICSI Herald,* op. cit.

enabling broad-basing of entrepreneureship. The Table given above shows that during 1989–90, SSI, with 1.94 million units, employing 16 million persons, produced Rs. 1,165,000 million worth of goods. Its exports account for about 30 per cent of the country's total exports with Rs. 76,260 million in 1989-90. In terms of value added, it contributes about 50 per cent of that of the manufacturing sector. At present, more than 800 items, and about 5,000 varieties of products are being manufactured by this sector. Along with consumer goods, a combination of sophisticated products are also manufactured.

Promotional Measures

In view of the various socio-economic roles played by this sector, the Government of India has set up several agencies to assist this sector through schemes of incentives, infrastructural facilities, grants, subsidies, financing, etc. The Industrial policies of 1948 and 1956 underline the need for Small-Industries Development Programme to enable this sector to acquire sufficient viability, which are discussed in this paper.

The various government assistance programmes which are existing include technical assistance, training facilities, industrial estates, export promotion, nucleus plants, subcontracting exchanges, supply of raw materials, marketing assistance, etc. The local Small Industries Service Institutes (SISI) help entrepreneurs in the form of preparing detailed schemes for setting up the units. The Small Industries Development Organisation (SIDO) prepares schemes and

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reports containing technical and general information on a wide range of industries. The SISI and its extension centre's goal is to improve the technical skills of the workers and acquaintance of the entrepreneurs with the advanced production and management techniques. The state governments also provide a lot of facilities with regard to industrial estates, e.g., subsidy on rent for factory accommodation, allotment of sheds on hire-purchase basis, sales tax concessions, rebate on water/power consumption, etc. SIDO extends services to the manufacturers of the export-worthy products in the form of product designing, quality upgradation, standardisation, packaging, allied services, etc. The nuclear plants set up by the government create a new focal point for achieving rapid industrial development by developing ancillary units. National Small Industries Corporation (NSIC) helps the small entrepreneurs to participate in government's hire-purchase programme. Sub-contracting exchanges act as an information house for matching the requirements of medium and large undertakings looking for subcontractors with the small scale units. The supply of raw materials is the responsibility of SIDO to see that the units do not suffer for want of raw materials.

The sector has been given a number of incentives, primarily in the form of fiscal concessions, and, to a certain extent, in the form of financial benefits. The Central Government provides tax incentives to the entrepreneurs in the following ways:

I. Income Tax Concession: Concessions in the form of deduction of 20 per cent of the total income for the intial ten years. For availing these concessions, the small units should be established in rural areas which cover:

(a) An area within the jurisdiction of a municipality or cantonment board having a population of not less than 10,000, according to the last census; and

(b) An area not being more than 15 km. from the local limit of any municipality.

II. Income Tax Holiday Concessions: Such industries are exempted for a period of five years from I.T. on their income up to 6 per cent of the capital employed. For the exemption, the undertaking must satisfy certain conditions:

(a) It is not formed by the splitting up or reconstruction of an existing business;

(b) It is not formed by transfer to a new business of building, machinery or plant previously used for any purpose; and

(c) This benefit will not be available to those undertakings which belong to non-priority items.

III. Excise Concessions: A small unit whose value of sale does not exceed Rs. 15 lakhs per annum (Rs. 30 lakhs where the unit is manufacturing more than two products) is completely exempted from payment of excise duty. For sale between Rs. 15 lakhs and Rs. 75 lakhs, the small-scale unit is required to pay excise duty at a concessional rate of 10 per cent subject to a minimum duty of 5 per cent *ad valorem.*

IV. Tax Incentives for Exports: The small units are allowed a deduction of 100 per cent of the profits derived from the export of such goods provided the sales of these goods are receivable in convertible foreign exchange.

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V. Investment Deposit Account Scheme: Under this scheme, the small-scale units are allowed a deduction from the profits of any business engaged in the manufacture of goods of low priority items to the extent of the amount deposited up to 20 per cent of the profits. Also, the deduction is allowed if the amount is deposited in a development bank, e.g. IDBI, before the expiry of six months from the end of the previous year. The account of the business should be audited and the amount deposited with the account shall not be allowed to be withdrawn before the expiry of a period of five years, except in case of:

- Death of an assessee,
- Dissolution of the firm,
- Partition of a Hindu undivided family,
- Liquidation of a Company, etc.

IV. Modified Value Added Tax (MODVAT): This allows the manufacturers to obtain instant and complete reimbursement of the excise duty paid on the components and raw materials. The scheme avoids the payment of duties on earlier duties paid on raw materials and components (for the final product).

Financial Assistance

Many financial institutions like the National Small Industries Corporation (NSIC), State Small Industries Corporations (SSICs), State Financial Corporations (SFCs), State Directorates of Industries, and IDBI provide long-term loans at low rate of interest for the period of 5–15 years against mortgage of assets such as land, building, plant and machinery, etc. The short-term loans are generally arranged by way of bank credit, overdraft facilities, discounting of bills, bills of exchange, and so on. Advances are provided to the small entrepreneurs by government agencies, SFCs and other financial institutions. The various assistances provided by the financial institutions are twofold schemes, viz.:

(a) Financial Subsidy Schemes:

- Adoption of indigenous technology;
- Interest subsidy for women entrepreneurs;
- Meeting cost of market studies;
- Marketing assistance to SSI units;
- Meeting cost of feasibility study;
- Promotion of ancillary units;
- Revival of sick units;
- Encourageing modernisation;
- Control of pollution in industrial units.

(b) Other Assistance Schemes:

- Development of technology;
- Self-development and self-employment;
- Risk capital;
- Margin money scheme;
- State aid/loan;
- State financial corporation;

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- Commercial banks;
- Credit guarantee schemes; and
- Machinery on hire-purchase.

Impact

Having discussed about the various assistance programmes undertaken by the Government of India for the development of the small-scale industry sector, now the question arises as to how far these promotional measures have been successful. Generally, the impression is that while small-scale units have grown steadily in number and in value of output, the impact of the government programme has been uncertain. Sandesara (1982) examined the effect of developmental programmes upon 206 small scale units. His study reveals that the unassisted units grew at a higher rate than the assisted ones. Interestingly, the unassisted units had a lower capital intensity and higher rates of return on capital.

One of the major objectives of small industrial development is that it would lead to the dispersed industrial growth in the country. However, the fact reveals that there is heavy concentration of some industries in some towns and states of the country. the Census of SS units came out with the analysis that more than half of such units are located in Maharashtra, Punjab, Tamil Nadu, Uttar Pradesh, and West Bengal. For example 92% of hosiery woolen units are concentrated in Ludhiana, 82% of hosiery cotton units in Coimbatore, Ludhiana, Calcutta, and Delhi, more than 60% of bicycle parts and accessories are manufactured in Ludhiana (Reddy, 1989).

Another study (SEDME, 1990) reveals that after launching the District Industries Centres the growth rate in number of units, exports, employment generation and investment (except production) is lower compared to the growth rate before launching the programme. Table 2 shows the SSIs' performance after DIC's inception.

TABLE 2
NEGATIVE ASPECT OF DIC's PERFORMANCE

Variables	Before DIC's (1969–70 TO 1977–78)			AFTER DIC's (1977–78 TO 1986–87)		
	G1	G2	G3	G1	G2	G3
No. of units	18.49	12.01	11.35	15.87	10.36	9.80
Production	36.21	18.53	17.00	45.02	19.72	18.00
Export	29.31	35.47	30.36	23.01	13.28	12.47
Employment	91.35	30.29	26.46	9.75	7.25	7.00
Investment	41.60	20.10	18.31	25.04	14.00	13.11

Source: _____, SEDME, NISIET, 1990, op. cit.
Note: G1 = Simple annual growth rate.
G2 = Compound annual growth rate.
G3 = Compound continuous annual growth rate.

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The entrepreneurs' experiences reveal that multiple agencies dealing with SSIs make the procedures more cumbersome (see Annexure 1 for a list of different agencies). The existing formalities dealing with SSIs are far too many (see Annexure 2). The departments complain that a certain group of unscrupulous entrepreneurs are looting the government incentives in collusion with many agencies, whereas the entrepreneurs complain bitterly about the harassment by the government inspector. In this regard, it would be worth noting former Prime Minister V. P. Singh's statement while inaugurating the meeting of SSI Board at New Delhi, in August 1990. He said, "*We should also put our heads together and see if the Inspector Raj can be dismantled altogether at least for the tiny sector to begin with if not the entire small sector*" (*Business Standard*, 1990). However, the most interesting and surprising part of several studies is that most of the entrepreneurs are not aware of the various incentive schemes available in the country.

A close look at the departments and agencies offering the a above said incentives reveals that: (a) Infrastructure is available only in cities and industrial belts while at districts and taluka levels they are almost non-existent. Quality of the infrastructure itself is very poor and there is no maintenance of the existing infrastructure. This is evident from the dilapidated condition of most of the industrial estates in the country. Decisions regarding location of the industrial estates are not taken in consultation with users' body or industry association. (b) Procedures for availing the state incentives are so cumbersome that it is difficult to comply with conditions that are laid down. Moreover, it takes years to receive the incentive, defeating the very purpose of providing financial relief which is urgently required at the begnning itself. (c) Banks provide loans at concessional interest rate of SSI. Here again, the efficacy of the bank loan sanction depends upon the status of the branch and its location. Also, bank rules are rigid for providing working capital assistance in SSI units who are clamouring for more flexible approach in this regard. (d) Tax incentives really make an SSI product competitive and economically viable. (e) Regarding technology, plant and machinery, marketing and raw material assistance and industrial training, the role of the state agencies is questionable! This is borne out by the fact that the existing small-scale units seldom ever felt the need of tapping government sources for its requirements.

Though the policy of growth for SSI in India is adequate, benefits are not reaching the entrepreneurs for whom they are meant. In a socialist economy like India, the government has to play its own role in the form of checks and balances, whereas, at the same time, entrepreneurs should also not take undue advantage by indulging in short-cut methods. And this is only possible through proper coordination of industry and the government.

It is the entrepreneurs who are responsible for impressive growth of small scale sector in the country. Any policy measure regarding SSI should address itself to the needs of entrepreneurs. Entrepreneurship cannot grow and sustain in a restrictive and bureaucratic environment which is unfortunately the current situation in the country. Though the main components for the new strategy in

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agricultural development, known as Green Revolution, were package approach, high yielding variety seeds, fertilisers, controlled water supply, insecticides and mechanical equipment, the success of this revolution has been possible due to the (a) full freedom of the sector and autonomy from government; (b) easy availability of bank loan at concessional rate and free and improved knowhow from its extension services, (c) observation of statutory rules and regulations. Hence, instead of piecemeal incentives administered poorly to SSI, covering different items by different agencies: (i) the sector should be given assistance similar to the agricultural sector; (ii) the sector should be freed from the clutches of statutory rules and regulations; (iii) protection should be provided for marketing of SSI products; (iv) the sector should be provided with modernisation and technology improvement assistance; and (v) appropriate management techniques are to be developed for effective management of SSI—it may revolutionise the sector.

It is true that the country's experiences in Green Revolution as well as in Dairy Development have succeeded by the efforts of our farmer entrepreneurs. However, the core of the scheme has been non-interference of the state on the farmers while the incentives/assistance are available at the doorstep of the farmers (see Annexures 3 and 4). Maybe, this kind of provision is required for our small scale entrepreneurs to scale new heights of industrial revolution in the SSI sector.

The Government of India has announced its new Industrial Policy for Small Scale Industries Sector. The main highlights of the policy include (a) an increase in the investment limits to Rs. 60 lakhs and Rs. 75 lakhs in respect of small scale units and ancillary/export oriented units respectively; (b) equity participation by other industrial undertakings in the SSI, not exceeding 24 per cent of the total shareholding; (c) a limited partnership for the supply of risk capital to the small scale sector. The time is ripe now to give a fresh thought to the needs of the entrepreneurs. The tax concessions (Section 80, IT Act) given to the people for investing in big business can be offered to the people investing in small business too. This will provide equal opportunity to the small entrepreneurs. Today, when we are talking about privatisation of public sector units, why not the government encourages privatisation in other areas like SSI infrastructure, incentive delivery system, maintenance of industrial estates, etc. As far as marketing is concerned, National Small Industries Corporation's contribution has been negligible. Hence, the government can consider to offer incentives to private marketing agencies in the SSI sector. The area which needs serious attention is simplification of procedures and liberation from bureaucratic control. In fact, no special treatment or extra concessions are required, rather the sector can be placed at par with the corporate sector so that the SSI sector becomes able to compete with other sectors of the economy. Any positive action in this direction can be expected only when the policies are worked out in consultation with its own representatives and policies are not merely on paper but their proper implementation takes place.

The need of the hour is to facilitate the availability of the incentive package to the needy entrepreneurs at the quickest possible time. Once the government stops administrating incentive packages and grants only the savings of

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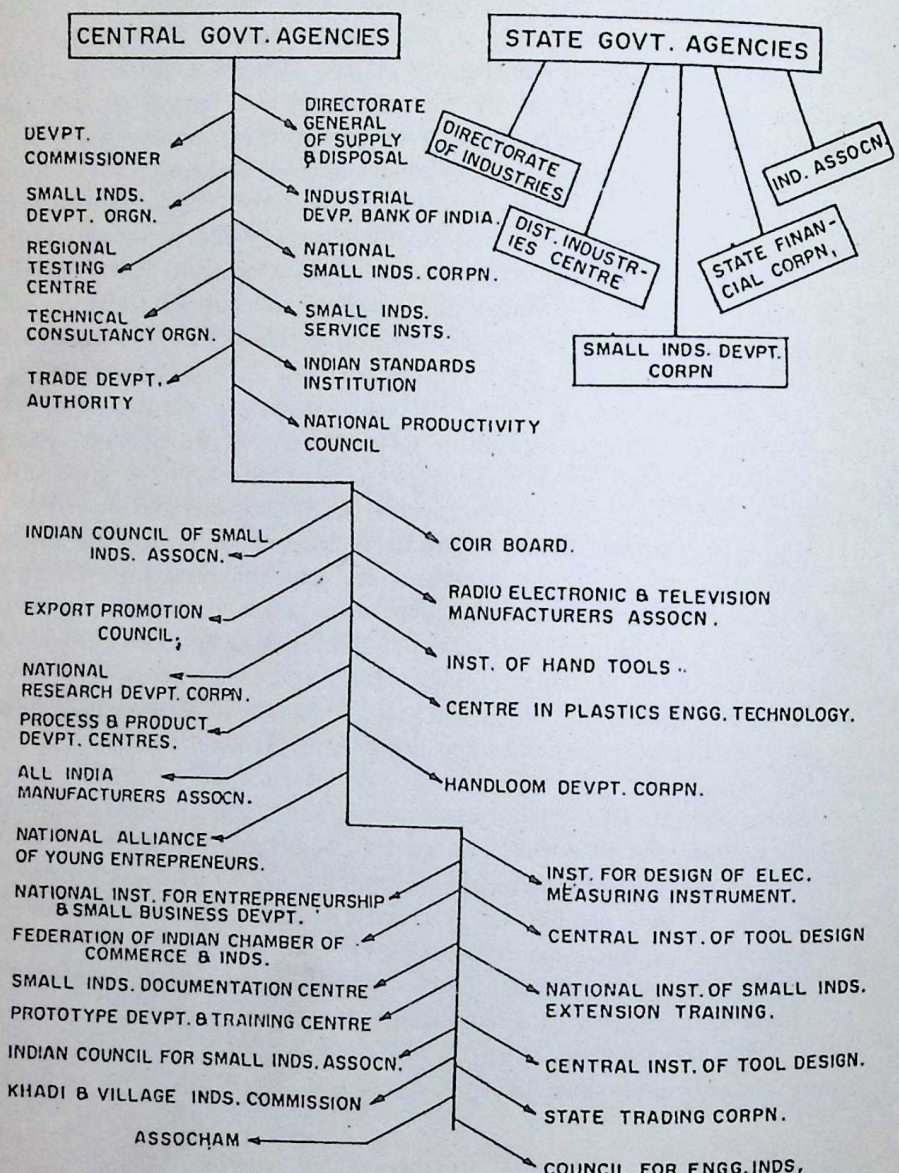
administrative cost which thus accrues, to the small scale industrial units for setting up industry associations, maintenance of their own industrial estates and disbursement of cash subsidies through banks, and continues with the tax incentives, it will benefit SSI without additional cost to government. Also, there is a need to set up product-specific, for instance, electronic, carpet, furniture-making etc., SSI centres, wherein all the needs of the small-scale units including incentive are satisfied by a single agency. Needless to say that no agency could be more effective in this context than the agency which is managed by owners of small-scale industrial units.

ANNEXURE 1
DIFFERENT AGENCIES DEALING WITH SSI


CENTRAL GOVT. AGENCIES
STATE GOVT. AGENCIES
DEVPT. COMMISSIONER
SMALL INDS. DEVPT. ORGN.
REGIONAL TESTING CENTRE
TECHNICAL CONSULTANCY ORGN.
TRADE DEVPT. AUTHORITY
DIRECTORATE GENERAL OF SUPPLY & DISPOSAL
INDUSTRIAL DEVP. BANK OF INDIA.
NATIONAL SMALL INDS. CORPN.
SMALL INDS. SERVICE INSTS.
INDIAN STANDARDS INSTITUTION
NATIONAL PRODUCTIVITY COUNCIL
DIRECTORATE OF INDUSTRIES
DIST. INDUSTRIES CENTRE
IND. ASSOCN.
STATE FINANCIAL CORPN.
SMALL INDS. DEVPT. CORPN
INDIAN COUNCIL OF SMALL INDS. ASSOCN.
EXPORT PROMOTION COUNCIL.
NATIONAL RESEARCH DEVPT. CORPN.
PROCESS & PRODUCT DEVPT. CENTRES.
ALL INDIA MANUFACTURERS ASSOCN.
NATIONAL ALLIANCE OF YOUNG ENTREPRENEURS.
NATIONAL INST. FOR ENTREPRENEURSHIP & SMALL BUSINESS DEVPT.
FEDERATION OF INDIAN CHAMBER OF COMMERCE & INDS.
SMALL INDS. DOCUMENTATION CENTRE
PROTOTYPE DEVPT. & TRAINING CENTRE
INDIAN COUNCIL FOR SMALL INDS. ASSOCN.
KHADI & VILLAGE INDS. COMMISSION
ASSOCHAM
COIR BOARD.
RADIO ELECTRONIC & TELEVISION MANUFACTURERS ASSOCN.
INST. OF HAND TOOLS.
CENTRE IN PLASTICS ENGG. TECHNOLOGY.
HANDLOOM DEVPT. CORPN.
INST. FOR DESIGN OF ELEC. MEASURING INSTRUMENT.
CENTRAL INST. OF TOOL DESIGN
NATIONAL INST. OF SMALL INDS. EXTENSION TRAINING.
CENTRAL INST. OF TOOL DESIGN.
STATE TRADING CORPN.
COUNCIL FOR ENGG. INDS,

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ANEXURE 2
TOO MANY FORMALITIES DEALING WITH SSIs

Companies Act .....
.....Environment Act
Pollution Control Act .....
.....Employee State Insurance (ESI)
Provident Fund Dept. .....
.....Shops and Establishment Act
Factories Act.....Minimum Wage Act
.....Sales Tax Department
.....Excise Duty
.....Income Tax Department
.....Customs Department
.....Boiler Inspectorate
.....Weight and Measures Department
.....Labour Union
Municipality Tax .....
.....Electicity Department
Water Department .....

ANNEXURE 3
FACTORS RESPONSIBLE FOR THE SUCCESS OF AGRICULTURAL SECTOR

Barring marginal or small size of agriculture farmers, this sector enjoys more facilities and incentives, direct as well as indirect, compared to SSI sector, eg.,

1. Agricultural sector is not differentated as small, medium or large, hence all enjoy the same benefits of concession.
2. The sector enjoys full freedom and autonomy from government as against hundreds of rules which SSI sector has to comply with.
3. The SSI sector is fully exposed to vagaries of market forces, hence highly vulnerable towards sickness or bankruptcy, while in agricultural sector, the main uncertainty is due to rains and pests which could also be covered under crop insurance scheme.
4. Government provides free and improved knowhow to agricultural sector through its extension services.

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ANNEXURE 4
THE FACTORS RESPONSIBLE FOR THE SUCCESS OF ANAND PATTERN OF DAIRY DEVELOPMENT

1. Techno-economic soundness of their projects,
2. Dedicated leadership with vision for service and growth.
3. Less exploitation by politicians for their personal aims.
4. Less corruption among the policy-makers and executives of milk cooperatives.
5. Felt need by the milk producers (growth of cooperatives was not thrust from above).
6. Adherence to the two-tier system of management from producers' side.
7. Bye-laws of society and unions are designed keeping in view the interests of producers and avoiding the vested interests which may malign the functioning of such organisation.
8. Faithful implementation of bye-laws and Acts.
9. Primary milk cooperatives buying milk directly from the families producing milk.
10. Engaging society workers only against payment of wages and no honorarium, thereby binding them to certain disciplines.
11. Attending to problems of producers at the right time and clearing their doubts.
12. Continuous and concurrent audit of societies enabling appropriate preventive measures to be implemented as soon as any flaw is detected.
13. No undue interference from officials of the State Cooperative or other departments.
14. Attachment and loyalty of members to their milk cooperatives who consider milk cooperatives as economic institutions where social and political conflicts are avoided for their own benefits.
15. Visible economic advantages to the members and village societies.
16. Demonstrable difference in the practices of traditional private trade and cooperative trade of milk (reduction in exploitation, uniform price for all, no cheating, assured payment, etc.).
17. Proper structure for trade with no exploitative competition between village and district milk producers.
18. Hiring and retaining of proper manpower at all the tiers for all the functions and less dependence on personnel borrowed from government departments.
19. Powerful professional managers in key positions.
20. Dividing line between policy-makers and managers/executives clearly maintained.

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21. Support from government and other institutions.
22. Training and motivation to all exployees at all levels.
23. Job security and job satisfaction to the employees.
24. Effective and meaningful control/supervision over primary societies and no delay in corrective measures.
25. Day-to-day live contact between the members and cooperative workers/ executives.
26. Democratic awareness and harmony among members showing disinclination to elect trouble-makers, position-hunters and selfish persons.
27. Established norms of business activities.
28. Proper planning and faithful implementation of development plans.
29. Sucessful examples of milk cooperatives in neighbouring areas.
30. Working on sound principles of business management.
31. Vision of growth among the policy-makers, executives and ultimate beneficiaries.
32. Trading capacity with earning capacity for institution.
33. Absence of disturbance due to local politics.

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BOOK REVIEWS

VARIETIES OF STABILIZATION EXPERIENCE—TOWARDS SENSIBLE MACROECONOMICS IN THE THIRD WORLD

By TAYLOR LANCE; Clarendon Press, Oxford, 1988; pp. 180.

Reviewed by Dr. U.N. LAKSHMAN, University of Mysore, Mysore.

Here is a very controversial but useful book on the stabilization experience of 18 countries, namely, Ghana, Ivory Coast, Kenya, Nicaragua, Sudan, Tanzania, Colombia, Egypt, Mexico, Philippines, Chile, Sri Lanka, Turkey, Argentina, Brazil, Peru, and as special cases India and South Korea. This book is a product of research supported by World Institute for Development Economic Research (WIDER) of the United Nations University. The contributors hail from Asia, Africa and Latin American countries.

The monograph, to put it in Lance Taylor's words, consists "unsung contributions of 18 papers describing experiences with economic stabilization in 18 developing countries".

This monograph has been divided into five parts. Part I consists only one chapter entitled "Economic Stabilization in the Third World". Part II consists 3 sub-divisions, Parts III and IV consist 6 sub-divisions, and Part V consists 5 sub-divisions.

In Part I, para two starts with: "Economies have to be stabilized when they are shocked." This clearly points out that the study of these 18 countries has been taken only because their economies have been shocked. Apart from explaining, this monograph offers suggestions on the basis of experience with stabilization and suggests how it can be done better. Most stabilizations in developing countries are carried out with international agencies (due to easy access to external resources) like IMF and IBRD. This chapter explains as to how the Bretton Woods adopted the methods to stabilize economies. Further, this study provides a rich source of comparative evidence and analyses the experience of stabilization that these countries have undergone in the past decade. Much of the discussion is devoted to spelling out the reasoning supporting different policy moves, and how their effects will depend on the historical and institutional conditions of the economy at hand.

In the second chapter entitled "Macroeconomic Shocks and the Social Matrix" the arguments have been divided into two policies, namely, the nature of internal and external shocks and political constraints, and in the third it is discussed with a little political consideration and the social matrix within which stabilization must unfold. Besides explaining the problems that shock economic

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stabilization, it also deals with man-made disasters which disrupt the economy from the side of supply. It also discusses the issues like inflation, financial chaos, over-enthusiastic liberalization of banking regulations and relaxation of exchange controls. For internal shocks Argentina provides a classic example in the late 1970's. In Argentina inflation was structural and there was overvaluation. Two policy mistakes—wilful over-valuation and removing exchange controls—left completely avoidable debt and deflation problems for subsequent economic teams to try to clean up. In the case of Tanzania, her budget underestimated the foreign losses induced by falling terms of trade. In the case of Brazil interminable conflict between local economists and teams sent by the Fund and Bank created more economic uncertainty. This chapter further clearly states that wars have contributed towards economic uncertainty.

The sub-division of the chapter entitled 'External Shocks' describes that these countries imports are mostly intermediate goods and capital goods. Though import substitution has been adopted worldwide as a vehicle for development, yet it rarely extends to machinery and equipment, as such commodities become doubly scarce. In the 1980's world prices declined for primary goods and at the same time exports of these items became stagnant. Sri Lanka, Nicaragua, Peru and Chile are examples of this kind of situation. At the same time debt payments increased and the real foreign aid declined. It comes to the conclusion that trade in poor countries is 'non-competitive' in nature. As with inflation, economic doctrine provides no sure guide for dealing with external crises.

In the third sub-division of the chapter entitled 'Social Matrix' the WIDER study approaches the political issues via a 'Social Matrix' comprising political relevant groups. A study on Brazil, Egypt, India and Sri Lanka suggests that concern for economic position of the poor may constrain policy decisions, though the poor themselves have no access to the levers of power. In the case of India, the macroeconomic theories of Indian policy make it monetarist; they restrain aggregate demand for fear of inflation. Indian policy-makers also claim that rising price will undermine the fragile economic position of the poor through forced saving. The moral is that getting into and out of economic stabilisations are not processes independent of major groups in the country but their political role and insertion in the economic surplus also plays a great role. The WIDER studies amply document this point.

The third chapter entitled "Stabilization Theory" emphasises the importance of macroeconomics. Most macroeconomic discourse revolves around the material income and product accounts. Though controversy is there whether output or distribution responds to macroeconomic shocks, yet this monograph has made it clear that a little bit of both is what usually happens in practice, but it is useful to keep the distinction for analytical purposes. Wage cutting and other repressive policies often feature in orthodox stabilization packages. In a stagnationist economy they can lead to deep depressions. Mexico, with its highly orthodox policies since 1982 provides a striking case. The WIDER country authors are of the opinion that their economies are behaving in anti-classical, stagnationist fashion.

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Fiscal imbalance is an aspect of many shocks that has to be stabilized. It is not often the primary destabilizing factor, despite orthodox assertions to the contrary. About price-cost relationships, the WIDER country experts did not endorse the view of extreme monetarist position regarding cost-push elements in inflation. Given the money supply higher costs just reduce margins. If price revisions make domestic production costs go up, devaluation may be required to restore external competitiveness. From a monetarist perspective, raising prices charged by public firms shall increase their operating surpluses and shrink fiscal subsidies, thereby reducing state borrowing from the central bank. Computable general equilibrium model simulations for India by Sarkar and Panda (1966) suggest that the cost pressures dominate the reduction in mark-ups induced by tighter money. Maasland (1987) gets similar results in a model for Sri Lanka. The conclusion is that the macroeconomic implications of state enterprise management should not be construed as an argument for capricious public sector pricing, rather it implies that there are both costs and benefits to price revision. On the fiscal side, changes in indirect tax or tariff rates alter cost structure and thereby prices. Since direct taxes typically account for a small share of revenues in developing countries this effect is practically important. In Mexico and Brazil attempts to raise state revenues have proved to be inflationary through the cost-price linkage.

In the sub-topic entitled "Balance of Payments" the study analyses the various components of the balance of payments like state interventions, aimed at merchandise trade account (austerity, devaluation, liberalization), capital market complications, and factors influencing trade in services. While commenting on the problem of depreciation the study starts: "Depreciation is unpleasant from the moment it occurs." The WIDER countries point out that extreme depreciation is always a risk under inflation and should be avoided. In the end of this chapter, the author has indeed done a great job by giving a checklist of factors relevant for policy design. This checklist makes even an ordinary man to understand the factors that are responsible for stabilization (pp. 69–74).

In Chapter IV entitled "Country Experiences" the countries have been divided into five categories based largely on macro shocks and policy responses, with an analysis of closure entering into the discussion of each economy's course. The groups are:

(a) Externally strangled small primary product (or labour) exporters: Ghana, Ivory Coast, Kenya, Nicaragua, Sudan and Tanzania.

(b) Countries that encountered foreign bonanzas of varying strength and duration: Colombia, Egypt, Mexico and the Philippines.

(c) Countries where there were fairly orthodox stabilization with a dose of regressive income redistribution and some balance of payments success: Chile, Sri Lanka and Turkey.

(d) Economies in which heterodox anti-inflationary shocks with progressive redistribution were attempted: Argentina, Brazil and Peru.

(e) Two special cases, one closed and one open to trade: India and South Korea.

In this chapter a fine analysis has been made of the history of stabilization

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with emphasis on how its macrosystem works, the types of shocks it went through, the policy responses, etc.

In the first group comprising 6 countries the monograph points out the commonn factors, namely,

1. All of them are exporting primary commodities (or labour directly) in unstable markets where prices are on a down trend since the mid 1970's.

2. All of them resorted to import-substituting industrialization and imported intermediate inputs.

3. All of them are exchange constrained. Statistical tables have been given for countries like Ivory Coast,. Kenya, Tanzania and Ghana. These figures make one understand easily.

In the second group comprising Colombia, Egypt, Mexico and Philippines, an analysis has been made to explain that these countries share external dependence like the former group but have been luckier in foreign commodity and capital markets. This part is well shown through tables for Colombia and Mexico; and for Philippines graphs have been given to explain the real liquidity of the banking system, besides statistical figures have been given for the same country explaining the real macroeconomic variables. For Egypt, figures have been given to show balance of payments on capital account (1974–1983–1984, million U.S. $). The author suggests rationalization in the mode of production in both agriculture and industry in future.

In the third group consisting of Chile, Sri Lanka and Turkey, the author explains how stabilizations involving liberalization coupled with planning, and regressive changes for income distribution helped. Of course all these programmes were undertaken with Fund or Bank collaboration. Argentina followed heterodox anti-inflationary shocks called Austral plans. Table 13, p. 123 clearly analyses the problem. In the case of Brazil statistics have been given to explain macroeconomic indicators and external accounts. In the case of Peru's painful journey through political fluctuation, external shocks and orthodox remedies applied by Bretton Woods and local economists have been explained.

Two Special Cases—India and South Korea

In the case of India and South Korea problems have been analysed in bringing about stabilization. India tried twice to stabilize external shocks First in 1966 through devaluation aimed to attract external aid. The second was an orthodox package following the first oil shock in 1973. Though apparently successful but not for the usual reasons. By quoting Pronab Sen (1987) it says that growth in the Indian economy is potentially constrained by (a) potential saving, (b) food supply, or (c) available foreign exchange. Several reasons have been given for the favourable outcome by Pronab Sen (pp. 135 to 137).

In the case of South Korea, the author emphasises the role of foreign borrowing. The first stabilization episode took place in 1970–71, when it devalued by 12%. The South Korean study shows that an open trade oriented policy with competition at home can reduce many problems facing the country. In 1979, a

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comprehensive stabilization plan (CSP) was introduced with emphasis on structural change to be pursued along liberal lines, and policies aimed at offsetting the second oil price shock. The author concludes by saying "the economy is a seamless web". All that can be done is pointing out the linkages emphasised. Devaluation can help the trade balance by causing either output contraction or expenditure and production substitution. Its activity reducing role is mentioned for Mexico and the Philippines. Favourable but often minor substitution responses (including smuggled goods) are mentioned for Ghana, Tanzania, Sri Lanka, Brazil, Colombia (in the long run), India and South Korea. Substitution is deemed weak or perverse in Kenya, Philippines, Mexico, Egypt and Chile. The study does not emphasise about liberalization which is supposed to improve efficiency and cut inflation.

The chapter concludes saying that "No general rule or thumb rule emerges beyond the rather detailed linkages spelled out in Table I, pp. 69–74. Much depends on current institutional and political circumstances in the economy at hand". Indeed this is the main theme of the country studies. The author ends this chapter with a quotation made by Tolstoy in his book *Anna Karenina:* "All happy families are alike, but an unhappy family is unhappy in its own special way." If for 'family' we read stabilization, the epigraph surely applies to the unhappy cases. Unfortunately it fails for the happy ones, which are also unique in their own way. Therein lies the art of economic policy in the short run.

The last chapter (5th chapter) entitled "How stabilization can be made to work better" appraises the schemes already analysed in the earlier chapters of this work. The WIDER country experiences suggest that inflation can be set off by monetarist or structural forces but depending on the circumstances, whereas the IMF view is that monetarism and structuralism is correct. The WIDER country papers on India, Colombia, Peru and Tanzania emphasize the macroeconomic implications of intersectoral distributional shifts. The Bretton Woods' view is that devaluation and other price signals do not require complementary interventions to work. The WIDER country authors are diametrically opposed. In total, Para 5.1 describes the differences between WIDER country studies and Bretton Woods on various items like devaluation, stabilization, liberalization, price level, exchange rate, interest hike, etc. Para 5.2 explains the genius of the Polak Model (or financial programming in the jargon of the Fund) that is built around the accounting identities for the banking system, balance of payments and government budget, that every country uses as part of its macroeconomic data base. 9 questions and answers have been discussed as to how the economy functions, and the remaining 5 have been discussed under the heading "Improving the Methodology" though it could be narrated with more ideas. The financial approach directs attention to the banking system, external balance and government finance. The study has given 8 useful recommendations to improve the financial and stabilization programmes.

The study concludes with questions of development strategy. It has also been recognised that no one full answer or strategy is possible. Therefore, a few comments have been made on the question of development strategy.

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The learned author Lance Taylor in his 'Acknowledgements' quotes: "If an academic author lifts ideas from two or three others, any one would call it plagiarism. If she or he has access to ideas from 18 papers, then formulating a synthesis can safely be called 'Research'. This monograph is one such work."

A unique feature of the WIDER stabilization studies is the fact that most of the country authors are nationals and have brought a wealth of local knowledge and experience to an area of macroeconomics, where the international discussion has for the most part been dominated by economists proposing policy on the basis of ideas popular in the developed world.

The WIDER research findings in this area have clearly established that current policy and practice cannot be regarded as sacrosanct and needs to be modified if they are to be relevant and effective in dealing with stabilization problems in developing countries.

The essays are lucid and very well written. The authors demonstrate their expert knowledge regarding the structure and practice of stabilization and have set forth ideas clearly and persuasively. The monograph might justifiably be called "an account of the practical experience of stabilization of WIDER countries", as the authors are very much at home with ideas on this important practical subject.

The book will be of immense value to all those interested in issues of stabilization, and to research students in stabilization systems and interrelated topics. It is specially useful to the policy-makers and those who are interested in understanding the stabilization efforts made by these 18 countries.

INDIA'S RURAL PROBLEMS

By K.N. PRASAD; Concept Publishing Company, New Delhi-110 059, 1991.

Reviewed by PRAFULLA CHANDRA SARKAR, University of North Bengal.

The author is an eminent educationist and economist who rendered long and meritorious service to Patna University. His India's Rural Problems epitomises his bid to transmit his accumulated wisdom to the Honours and Postgraduate students of Indian universities.

The twenty two chapters into which the contents of the book are divided are as follows: Place and Significance of Agriculture, Agriculture and Economic Development, Agricultural Production in India during the Plan Period, Productivity of Indian Agriculture, Distribution of Land Holdings in India, Types and Organisation of Indian Farms, Agricultural Prices and Agricultural Production, Marketing of Agricultural Products and Terms of Trade between Agriculture and Industry, Food, Agricultural Price Policy, Capital Formation in Agriculture, Agricultural Finance, the Green Revolution and Technological Progress in Indian Agriculture, Mechanisation of Agriculture, Irrigation, Land Reform, Rural

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Development, Rural Poverty and Inequality, Rural Unemployment, Role of Agro-Industrial Complexes in Rural Development and an Overall Appraisal.

Professor Prasad accepts the Chelliah estimates of the plan-wise agricultural growth rate. The reader finds that of the first six plans, only the three, namely, the first, second and the fifth, register a growth rate equal to or more than 4 per cent. Again on the basis of the seventh plan document he shows that compared to the average of 1967–70 agricultural production increased to more than $1\frac{1}{2}$ times during the agricultural year 1984–85. Kulashreshtha and Tiwary have been cited to show that gains in agricultural production are attributed to three types of factors, namely, (1) technological (HYV's, fertilisers, irrigation, and improved machinery, (2) institutional (land reform), and (3) organisational (cooperative Societies, Panchayats, Community Development programme and Extension Services, etc.). Another author, Sen, has been referred to to say that increases in agricultural production came in the main through the modernising of the peasant proprietors and the 'privileged tenants' who were helped by the government. Hanumantha Rao is quoted to note that during 1961–71 land and labour had ceased to be the predominant sources of growth in Indian agriculture. Mention is made of his view that as much as 63 per cent of the growth in agricultural output is due to capital and knowledge. While Dantwala acknowledged the role of price in bringing forth increase in agricultural productivity in that the farmers could sell any amount at a pre-fixed price, he found that during the period 1951–74 it is the technological breakthrough that caused an upward shift of productivity.

Apart from mentioning some more reasons for increase in agricultural production, Professor Prasad traces some reasons for slow overall growth of agricultural production in this country. The factors he lists for the purpose are (a) unfair allocation of plan outlay to agriculture, (b) worsening of the terms of trade for agriculture, (c) inadequate progress in land reform, (d) failure to treat farming as an enterprise at the same level as we treat industry, (e) preference by the upper echelons of the rural sector, of profession and services to farming especially in the eastern region. Discussing the trends in production of individual crops the author draws our attention to the fact that increase in the production of oilseeds has been most unimpressive till the early eighties. Still more unimpressive is the increase in production of pulses. The author has also shown a steady decline in the per hectare yield as well as per capita availability of pulses.

The preceding two paragraphs summarise the author's chapter entitled 'Agricultural production during the Plan Period'. This is indeed the way in which the author writes each of the twentytwo chapters of this book. The reviewer does not pretend to say that a chapter like the one summarised here cannot be improved upon. Nor can he hide the need for a still more exhaustive bibliography including still more works produced since the fifties and having direct and indirect bearing on subjects under discussion.

Yet the real point about Professor Prasad's *India's Rural Problems* is that all the twentytwo chapters have been written in the same standard, with the same vigour and with the same unflagging interest. The result is that even researchers

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who mostly work on one or a few super subjects and are on the lookout for more super subjects may profit substantially by a careful reading of Professor Prasad's volume.

I find special delight in recommending this book for Honours and Postgraduate students of our universities as well as candidates for competitive examinations.

The printing mistakes never cross the permissible limits. But as the author, often enough, refers to writers by surnames rather than by short names, it becomes at times difficult for the reader which Sen, for example, he means.

INTERNATIONAL MARKETING

By P.K. JAIN;, Printwell Publishers, Jaipur, 1988.

Reviewed by S. SHIVA RAMU, Professor, IIM-B.

The book under review deals with India'a export scenerio from marketing angle. As such the title is misleading. It would have been better if it were titled as "India's Export Scenerio". This is one of the few Indian books which try to analyse the exports from marketing angle. The author has used the traditional Four Ps in the book.

The introductory chapter deals with the debate between export-led growth or growth-led exports. There are three sets of factors which may give different performance of economies. They are technological factors, economic behaviour and policy formulation. With these, the author concludes that the export promotion and import substitution strategies of development are two sides of the same coin.

The first P of the four in marketing is Product. The aspects are the generation of product ideas, product screening, product development, the role of R&D, packaging, labelling and marking. The cases illustrating the above factors are Maruti Udyog, Ashok Leyland and Mahendra & Mahendra Limited and Asian Paints. It briefly touches on NRDC, Indian Institute of Packaging and ISI Laboratories and their role in helping exports of India.

The second P from the four P's is Pricing. This is dealt in Chapter 4. It gives the price differentials of material cost between domestic and international prices for a few commodities and also financial and risk costs between India and few other countries. He also deals with transportation and distribution labour costs in India. This in turn affects the competitiveness of Indian products in international marketing.

Third P of the 4 Ps deals with the Place and Pipeline. The consideration of this is spread in three chapters. Chapter 7 deals with International Marketing Research, Chapter 8, Potential Markets for Indian Goods and Chapter 6,

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Distribution Channels. He identifies in Chapter 7 that the existing infrastructure for international marketing research is not sufficient for the needs of the exporters from India. He tries to identiy the challenges in the field of international marketing research from problem definition stage to data collection and interpretation. He tentatively suggests how to deal with the gap in the marketing research data. He suggests trade information system and computer data base to provide necessary information to the customers—something similar to IMS American agency. He also briefly touches on British Overseas Trade Board and their role in market research. He finds that the existing institutions like IIFT, TDA and EPCs are not providing relevant information. "Their efforts are limited to sending commodities and trade panels to various countries."

Chapter 8 deals with potential markets for Indian goods. He takes regionwise features and scope for Indian products. Regions that are dealt are Africa and East Europe countries. In each one of these he tries to identify a few practices in those countries and the possibility of India's exports. Chapter 6 deals with distribution channels where it deals with the agencies like State Trading Corporation of India, Minerals and Metals Trading Corporation of India, MICA Trading Corporation of India. He gives briefly their present activities. Besides, he also describes the role of Trading Houses and Distribution Agents. He also suggests the franchising system for the International Marketing where Indian exporters can try to exploit these facilities.

The last P of the 4 Ps deals with Promotion. On this aspect the author has touched in Chapter 3 and Chapter 5. In Chapter 3 the author desccribes institutional support for Indian customers. He gives some activities and schemes available in Exim Bank, Export Credit Guarantee Corporation, Trade Fair Authority of India, TDA and Export Promotion Councils. In most of these, he has given the objectives and role of these organisations and some information regarding their activites. In Chapter 5, he takes up the export promotion measures adopted in India. He tries to categorise these policies either as demand-oriented or as supply-oriented promotion policies. A brief description of some of the schemes such as duty drawbacks, cash compensatory support, 100% export-oriented units and free trade zones are given. He also describes the export-import pass book schemes and marketing development assistance.

In Chapter 9, the author deals briefly on Indian multinationals, the guidelines for approval from Government of India, the pattern of investments, joint venture or licensing and pattern of Indian investments. In Appendix, he tries to give the objectives of Korean Trade Promotion Coporation, The Hong Kong Trade Development Council and the Singapore Trade Development Board. In the last chapter, the author tries to summarise some of the recommendations as a remedial for tapping Indian export potential. He identifies government business partnership, unnecessary regulations, quality control, product development process, institutional mechanism and the role of multinationals.

Though the author has given some references, the analysis does not reflect them. The institutions which he has mentioned in this book are mostly from the

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annual reports of some of the organisations. The author could have done an evaluation of their activities in depth. In total, the book lacks analysis. With slight rearrangement of the chapters and a little more analysis this book would have been a good introductory book for Indian exporters from the marketing angle. In spite of some drawbacks mentioned above, the book can still be read as a primer by the students of Export Marketing.

A REACTION TOO FAR

By TONY KILLICK, Overseas Development Institute, Regent's College, Inner Circle, Regent's Park, London, 1989.

Reviewed by R.L. GOEL, formerly Professor of Economics at the University of Meerut (India).

The monograph under review has six chapters dealing with economic theory and policy relating to the role of the state in developing countries. The author while laying down the structure of the monograph mentions the following propositions:

(1) The major swing that has occurred in thinking about the nature and role of the state, although well founded in many respects, has gone too far and a correction is now under way.

(2) The most important questions about the role of the state are not How big? or How much? but What kind? What comparative advantage? How can state performance be improved?

(3) In considering its policy recommendations we should be sensitive to the shaky or narrow theoretical foundations of much contemporary normative economics, especially when applied to LDCs.

(4) Contemporary thinking does offer valuable insights into aspects of policy in LDCs but there are no panaceas, no grounds for dogmatism. Aid donors should encourage experimental, tailor-made approaches to the design of policies in recipient countries.

At a time when there seems to be a general trend towards liberalisation of economies and adoption of market system, the monograph provides a timely warning against the danger of carrying the process of change too far. Important changes are taking place in economic theory and they have been accompanied with a sharply reduced faith in policy interventions and the assertion that the market economies always work better than controlled and planned ones. In most of the developing countries the mainstream thinking about economic policy has largely been influenced through the vehicle of policy 'conditionality' of the Bretton Woods leaders. The economic difficulties of the indebted countries of

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Africa and Latin America have left them highly susceptible to the policy 'advice' of the donor community. It has resulted in a perennial trend of economies getting liberalised and adopting the market system. An environment has been created in which the developing economies are made to believe that capitalist path of development is the best and quickest way for them to attain higher rates of economic growth. But history shows that it is not the quickest way of development. It has got its own pitfalls. Capitalism is not all good and it also falls sick when policy intervention becomes almost a necessity.

The monograph starts with the analysis of some recent developments in economic theory and their impact on policy relating to the economic role of state in developing countries. The 1980s have witnessed a sharp reaction against Keynesianism. Its emphasis on demand management and relative neglect of supply side conditions has been under severe attack by monetarists and supply side economists. Today there is wide agreement on the importance of supply side in the macroeconomic performance of an economy. First monetarism, then rational expectations and then the 'new classical' macroeconomics came forward to fill the gap left by the attack on Keynesianism. The more recent contributions to macro theory are deeply pessimistic about the feasibility of effective macroeconomic management. Furthermore, the reduction of poverty and inequality through state interventions is being looked with increased suspicion.

The author builds up a strong case for rethinking about the role of the state in the economy. The recent reaction against Keynesianism has been a case of over-reaction. State intervention in an economy is neither all good nor is it all bad. It should be judiciously dealt with. The need for rethinking particularly arises from the fact that all brave promises of post-Keynesian macro theorising to banish the state from the task of economic stabilisation has not been fulfilled. In considering the desirble role of the state there are essentially two different issues, which are sometimes confused: (a) how large should the state be in relation to total economic activity; and (b) what types of policy instruments should the state employ? A particularly common source of confusion is between arguments for a reduction in the role of the state and arguments for a shift from policies of planning and control to policies which work through the markets. Market oriented reforms may actually require a greater role of public institutions but of an entirely different type. Rapid economic development of Japan and South Korea is not because markets were left free—for they did not—but that in both cases the relationships established between their governments and private sectors were highly supportive and non-antagonistic.

Particular emphasis has been laid on the role that the state should play in less developed countries. Many LDCs remain sufficiently different from developed countries and hence sufficient care is needed while exporting policy recommendations of the mainstream theory from the latter to the former. Some of the writers have drawn negative conclusions about the usefulness of mainstream theory in designing economic policies in less developed countries. It has been observed that the developments in economic theory have not proved helpful in guiding

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economic policy. Nor can the situation be expected to improve. But this represents an extreme view as it cannot be denied that contemporary mainstream thinking has direct relevance to less developed countries' policy problems in a number of ways. Firstly, the stress in contemporary macroeconomic theory on importance of taking a long-term view, and on the management of supply as well as of demand are quite relevant to the policy needs of LDCs. One of the counter-revolutions in macroeconomics has resulted in eroding the distinction between 'macro' and 'micro' theory and in particular the insistence that macroeconomics should have a firm micro foundation. This is quite important in the context of less developing countries. Furthermore, the theory of directly unproductive profitseeking activities and rent seeking are of particular relevance to the conditions of less developing countries. The current developments in the theory if trade policy also provide valuable lessons for policy-makers in less developed countries. Particular attention has to be paid to the implementation of trade policy of returns to scale and imperfect competition. The important issue before the developing countries is whether they should follow a policy of free trade or protection.

In the concluding chapter certain observations have been made which should be kept in mind while laying down 'conditionalities' by lending institutions or making suggestions for policy-making in LDCs by other agencies. Firtst, the way in which the public sector goes about its task is more important than its absolute size. What matters more than its absolute size is how the state goes about its tasks and what relationships it establishes with the private sector. Second, to the extent that policy interventions are necessary, it is better that they should work with, or through, market forces than against them. It is more than likely that failure will attend policies which seek to swim against the tide of market incentives. Third, an emphasis on the supply side of the economy; on measures that will improve the working of key markets; of avoiding and reducing rent-seeking activities and other distortions created by the government interventions; taking greater advantage of international trade and reducing levels of protection.

The book is a valuable addition to the literature on economic policy in less developed countries. It is a timely publication emphasising the need for caution by LDCs while adopting a policy of liberalisation and market oriented economy. It also calls for extreme care by international lending institutions and donor countries while laying down conditionalities and policy advice to the aid recipients. The book can provide considerable guidance to less developed countries in their choice for policy options and can help them in evolving a useful role for the state in developing their economies. The monograph can provide a theoretical foundation for further research work, particularly the empirical studies of various policy options adopted by the LDCs and its impact on their growth performance.

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NEHRU AND INDIA'S LABOUR MOVEMENT

Edited by M.P. PAREKH and others, Oxford and IBH Publishing Co. Pvt.. Ltd. New Delhi, 1991; Price not mentioned.

Reviewed by O.P. MISRA, Principal, CGN (P.G.) College, Gola Gokarannath, Kheri (U.P.)

The book under review is an outcome of a national seminar on the role of Nehru in promoting the Labour Movement in India, organised by the Gandhi Labour Institute, Ahmedabad in Nov. 1989. There are seven chapters, apart from the coverage of the inaugural function in xiii pages and 3 appendices.

Pt. Jawaharlal Nehru was not only the liberator of the country but also its consolidator. He was such a political leader who worked with the utmost zest and zeal as the Prime Minister of India for 17 years for making the political liberty meaningful by giving it the content of economic liberty and modernizing the backward economy of India so that it could move with a sense of pride and self-confidence on the world boulevard. In fact, he was a statesman, not a politician. The statesman is interested in the betterment of future generations while the politician concentrates himself on the welfare of the present generation. Nehru belonged to the first category. From the very beginning of his career in politics, Nehru aimed at exorcising the devils of poverty, unemployment, hunger, disease and squalor. As indian workers and peasants were the worst sufferers of these evils, Pt. Nehru tried to inspire them to work for strengthening the country and thereby improving their own lot. He was a benefactor of the labouring class and promoter of the labour movement. In the technical and traditional sense he was never a labour leader. All these aspects and achievements of his multi-faceted personality have been protrayed in the first 5 chapters. In the keynote address of Natwar Lal Shah, Nehru's deep concern for outside leadership in the labour movement and resort to violence, and his emphasis on the just system of resolving conflicts between labour and capital for optimal production have been depicted. Mr. Shah has aptly quoted the presidential address of Pt. Nehru given at the annual session of AITUC in 1929 at Nagpur and the same has been observed by Navin Chandra Barot in Chapter 5.

In post-independence India, Pt. Nehru was very much eager for a strong trade union movement, a guarantee of living wage, and satisfactory working and living conditions. In Chapter 1 the contributors have laid emphasis on Nehru's views regarding industrial relations, strikes and lockouts and splits within unions. To him a strong trade union movement was also needed for facing the problems that used to beset the country from time to time. In Chapter 4, A.N. Buch while highlighting his contribution to labour movement quotes Pt. Nehru's last message (24th May 1964) to the INTUC annual convention from Circuit House Dehra Dun. The message runs: "I send to the 15th annual session of the Indian National Trade Union Congress my good wishes. India is facing difficult problems today and it

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is very necessary that the organised labour movement should react to them properly. A mere agitational approach is not helpful in the circumstances. We have to consider every problem in its larger context. I hope, therefore, that the INTUC will do this and will function from the larger point of view and at the same time for its own special demands" (page 65).

Pt. Nehru was the initiator of the system of mixed economy for India. To him private and public sector were complementary. In order to mitigate the evil of concentration of economic power and to provide the opportunities for social justice, dignity of labour, fair deal to labour, etc. Pt. Nehru increased the outlay on public sector in every successive Five Year Plan. It rose from 52% in the First Plan to 66% in the Third Plan. In Chapter 7, Pramod Verma has discussed Nehru's attitude towards the public sector. His conclusion about its performance and realization of Nehru's dream seems to be quite correct. He observes, "It is in this respect that the public sector enterprises have failed to live up to the expectations of Jawaharlal Nehru" (page 94).

The book succeeds in analysing Nehru's contribution to labour movement. There are certain cases of repetition in the subject matter although it is quite natural in the publication of such a book. Different contributors and participants of the seminar discuss the same theme in their own way. The single author of a book is always in a position to avoid repetition and overlapping of the subject.

In the proceedings (page xi) the year for adopting the goal of socialistic pattern of society of India is given as 1957. The goal was adopted in the Avadi session of the Congress in 1955, not in 1957.

Conscientiousness is a better word for conscienciation appearing on page XIII. On page 23 the preposition "in" is missing between "founded" and "1919".

WORKERS' PARTICIPATION IN MANAGEMENT

by R.K. VERMA, Ph.D. and P.R.N. SINHA Ph.D. Published by Oxford and IBH Publishing Co. Pvt. Ltd., 66 Janpath, New Delhi-110 001; year not mentioned; pages 131; price Rs. 125/-.

Reviewed by PROF. O.P. MISHRA, Principal, C.G.N. (P.G.) College, Gola Gokarannath, Kheri.

The book under review is divided into five chapters including an index of three pages. The first chapter discusses various definitions and objectives of the idea of workers' participation in management. Definitions given by J.R.P. French, M. Shashkin, Ian Clegg, Keith Davis, V.G. Mhetras, K.C. Alexander and Michael Salamon have been examined with their merits and demerits. there is no definition which can be said to be acceptable to all. Authors are quite correct when they

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observe, "A perusal of the definitions of workers' participation in management clearly indicates that it has been conceived of differently and explained in different languages" (Chap. I, p. 6). In the same chapter, ethical or moral, socio-political and economic objectives have been clearly discussed. Authors are of the opinion that the absence of workers' participation leads to misunderstanding, resistance, low morale and suspicion between employers and employees.

The second chapter gives an account of various schemes of workers' participation in capitalistic and communistic countries. Authors arrive at the conclusion "there is a considerable diversity in the schemes of workers' participation in management in the western countries" (Chap. II, p. 40).

In the third chapter, schemes of participation in some of the Asian countries (Japan, Singapore, South Korea, and Israel) have been analysed. There is a lot of diversity in the nature, forms and functions of the schemes which have been influenced by the structure of trade unions, role of collective bargaining, ownership of the enterprises and policies of the Government.

Chapter 4 deals with workers' participation in management in India. The start was made with the introduction of Works Committees. Afterwards, Joint Management Councils, Shop Councils, Joint Councils and Unit Councils were experimented in industrial undertakings. But these schemes could not fulfil the objectives envisaged in the idea of workers' participation. On 30th May 1990 a bill known as the "Participation of Workers in Management Bill" was introduced in the Rajya Sabha. As the United Front Government fell, the bill could not be enacted with the result that the ideal is still a far cry in India.

Authors have done an important job in discussing the hurdles in the way of workers' participation in management in India. They are of the opinion that all the schemes in the area of workers' participation have proved a failure. The failure is due to the fact that participation involves parting with power and neither of the two—capital and labour—likes to be deprived of authority. Moreover, lack of specific arrangements for sharing the gains of participation, multiplicity of trade unions, imposition of schemes on employers and workers by the government, multiplicity of joint bodies in Indian industries and lack of proper education and training with regard to the content, process and other relevant aspects of participation are also important hurdles. Authors have aptly quoted Zivan Tanic who has observed, "it appears that the experience of workers' participation in India is not only at the lowest level of evolution but also that workers, unions, employees and state do not have any real interest in its success. The necessary economic, social, political and cultural conditions concomitant to the success of such an experiment are not ripe in India."

The fifth chapter is devoted to the findings of some case studies in various industrial units spread over the country.

The book has succeeded to a large extent in discussing the idea of workers' participation in management in capitalistic and communistic countries and in India wedded to mixed economy. The book is rich in subject matter, presentation and analysis. Its outer (get-up) is as good as its inner.

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PANCHAYATI RAJ REFORMS AND RURAL DEVELOPMENT

By N. SIVANNA; Chugh Publications, Allahabad (India), 1990.

Reviewed by: S. SHIVA RAMU, Professor, Indian Institute of Management, Bangalore..

Every now and then, there has been a public debate on the devolution of power from Union Government to State Government to local Village Panchayat. It is felt that any developmental activities would be better left to self-regulation at the action level than planning and implementing from top-down system.

Panchayat Raj system is nothing new to India. There have been various experimentations both in pre- and post-independence India. Many legislations and various forms of Panchayat system have been tried. Recently, there are opposite views whether Panchayat system will reinforce the existing inequalities in rural India or revitalise the true participation of all people concerned democratically. Most of the discussion centres round the structural design of such institutions. Very little discussion is based on solid research of what really happened to these institutions through various legislations and implementations. In this connection, the study reported by N. Sivanna is timely and appropriate. It will make discussion more informed and meaningful.

The author starts with a historical background of the evolution of Panchayati Raj institutions in India. The literature existing at present mostly either deals with the structural aspect of Panchayati Raj (PR) or problems relating to the working of Panchayats. There is some research dealing with performance of these institutions. Again these studies end up in the study of structural aspects of Panchayati Raj. The present study by N. Sivanna has adopted 'a case study' method. He has selected one Taluk in Karnataka and studied their organisational and functional dynamics thoroughly. He has critically analysed the structural and behavioural aspects of the Taluk.

The author tries to give the evolution of the Panchayat Raj institutions in India. The impetus to local government was given in 1870 by the Mayo Resolution. Subsequently, Lord Rippon (1882) is considered as 'the father of local self-government in India'. There was also a Royal Commission on decentralisation in 1907; Montague-Chelmsford in 1918 and Simon Commission in 1927 dealt with the local self-government aspects of PR. In 1948, Article 40, regarding the organisation of Village Panchayats and endowing sufficient powers and authorities for such units, was incorporated into our Constitution. On the basis of these, a community development programme was initiated in 1952.

Balwantrai Mehta study team provided the blueprint for Panchayati Raj system. The first to adopt this were Rajasthan and Andhra Pradesh in 1959. During the same year Karnataka and Orissa also adopted it. However, different States adopted different systems. Some adopted the two-tier system of Village Panchayat and Panchayat Samiti (Meghalaya, Nagaland and Mizoram) and others the

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one-tier system of Village Panchayat (Orissa, Himachal Pradesh, Madhya Pradesh, Haryana). The 11 other States adopted the three-tier system of Village Panchayat, Panchayat Samiti and Zila Parishad.

Concurrent to the development at the national level, Karnataka also had initiated Village Panchayat system through Mysore Local Boards Act, 1902 and Village Improvement Scheme, 1914. Subsequently, Venkatappa Committee, 1950 submitted its report on local self-government. On the basis of its recommendations, Mysore Village Panchayat and District Board Act, 1952 was enacted. Again another Enquiry Committee was set up in 1954, on the basis of which a three-tier structure was suggested. A new legislation called Mysore Village Panchayats and Local Boards Act, 1959 was enacted to bring uniformity to all the areas which formed Karnataka. Karnataka has a three-tier structure—Village Panchayat, Taluk Development Board and District Development Council.

As an example, for an indepth study of the working of TDP, the present case study has taken up a single Taluk Development Board, viz., Koratagere Taluk. Chapter 3 deals with the environmental setting of the Taluk and describes its location, population, literacy, social and economic patterns, occupational patterns, distribution of land holdings, cooperative institutions and political processes. He finds that in the Taluk both the social process and economic pattern are based on inequalities.

Chapter 4 deals with the working of TDP. It analyses that the structural and functional aspects were classified into obligatory and discretionary powers and functions. The structural matrix of the TDP had representatives and administrative wings. The power structure was in the hands of the dominant and well-to-do castes. TDP had constituted five committees such as Standing Committee, Audit Committee, Public Health Committee, Social Justice Committee and Sub-Committee on Agriculture. However, some of the developmental activities of TDP have been curtailed due to the introduction of 'training and visit' system in 1980. Since there was lack of financial powers, most of the activities were referred to higher authorities in bureaucracy. As such, "the system of linkages that exists between these institutions is neither organically nor functionally effective".

Chapter 5 deals with the TDP Administrative Wing. The author examines the role of non-officials like President and Vice-President and Members as well as official members, BDOs, EOs and VLWs. BDO was involved in more than the function of TDB. He was also concerned with the implementation of special programmes like NREP and IRDP. The BDOs gave the indication that there were political pressures from non-officials which in turn affected efficiency. The Extension Officers were under dual pressure, one of the BDO administratively and the other of technical supervision by the District Supervision Officers. Most of these officials had no interest in implementing the programmes. The multipurpose nature of work done by VLWs led to disillusionment about their job performance. The interviews indicate that there was a tendency of 'putting blames' on each other.

Chapter 6 discusses planning, decision-making and implementation in TDP.

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Most of the decision-making processes were concentrated in the BDO and the President of TDB. However, as there were several rules laid down in the Act, it reduced the powers of the decision-makers. Besides, whatever decisions were taken were conditioned by group interest. Several times the TDBs face the problem of execution of work due to nonavailability of funds in time due to socio-political considerations. Sometimes the implementation of the programmes led to consequences far from the main objectives of the schemes.

Chapter 7 deals with the financial aspects of TDB. The analysis of income and expenditure shows that there was an increase in expenditure compared to the income. This is not conducive for developing institutions like TDB. In the 1985 Act, the State Government introduced Zila Parishad at the district level replacing DDCs, Taluk Panchayat Samitis replacing TDBs and Mandal Panchayats replacing earlier Village Panchayats. This was built on the model suggested by Ashoka Mehta Committee Report which suggested a two-tier system. However, the author feels that the structure and functions of Panchayats in Karnataka are below expectation due to lack of organic linkages with other institutions. The major drawbacks in TDBs functioning are:

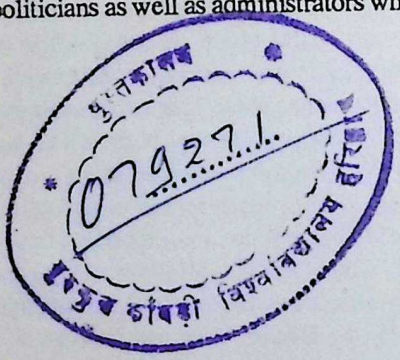
—TDB was working as an increasing role of an agency of Government.

—TDB was entirely dependent on the Government in the financial field.

—The composition of TDB was heterogeneous and led to insignificance.

In spite of these experiences of TDB, the Act of 1985 has left it in the old form in the middle-tier. However, the Zila Parishad and the Mandal Panchayats are reorganised by giving more power to an elected body.

In recent days, there has been an on-going discussion on the Panchayati systems in India and very few are based on the actual facts of the operation of the earlier systems in the country. In this connection, this book tries to fill the gap through a case study method. An indepth study has been done on all aspects of the middle-tier Panchayat system, namely TDB. This book is recommended for both politicians as well as administrators who are involved in local administration.



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